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# Brazil 1938

A NEW SURVEY OF BRAZILIAN LIFE

ECONOMIC, FINANCIAL, LABOUR  
AND SOCIAL CONDITIONS FROM  
A GENERAL POINT OF VIEW

SERVIÇO GRÁFICO  
DO INSTITUTO BRASILEIRO DE GEOGRAFIA E ESTATÍSTICA  
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## FOREWORD



*The task of preparing and editing "BRAZIL — 1938" was committed to the Instituto Brasileiro de Geografia e Estatística (Brazilian Institute of Geography and Statistics) by the Ministry of Foreign Affairs. The work, which used to be published in the past years either in Portuguese or in English or simultaneously in both languages, brings together, in every edition, the more important facts concerning Brazilian life. It contains such data as to comprise, if not all the various phases of the Nation's situation and development, at least the most fundamental aspects in a synthetically arranged form so designed to incite greater interest, mainly abroad.*

*The importance which the Government has given to the plan of strictly technical co-ordination of the national statistical services under the Institute, leads Brazil to considerable strides on the way of acquiring a minutely comprehensive knowledge of the whole range of her existence, thanks to the increasingly accurate and regular numerical surveys. The principal publications of the I. B. G. E., among which the "Anuário Estatístico do Brasil" is prominent, deal in great detail with general information affording possibilities of demonstration of the Brazilian reality in a very satisfactory panoramic outline.*

*Intended mainly to serve the purpose of providing ready reference on subjects published for wide distribution, the present book avoids somewhat the rigid systematic character*

*of our merely statistical works. The idea was to set forth in a simple and attractive manner succinct and varied pictures of the situation in Brazil, focused by preference along lines suited to the particular objects in publications of this character.*

*The plan that falls within the scope of this work permits of a further measure of improvement and efficiency to the length to which the statistical treatment of the book is truly an element of forceful cooperation. The whole scheme is to be broadened and perfected, both in technic and accuracy of the subject matter presented. It is, indeed, our desire to include in future editions every feature adding quality and form to the work, this chiefly with a view to enhancing the general account by an ever-better display of the material and moral values relating to the young and progressive Brazilian civilization.*

JOSÉ CARLOS DE MACEDO SOARES,

President of the Brazilian Institute of Geography and Statistics



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Map of Brazil showing the political divisions of the territory  
(Federated Units), their respective capital cities  
and principal rivers.



# *INTRODUCTION*



## SYNTHESIS OF A POLITICAL EVOLUTION

**T**HE interest attached to this publication is certainly increased in the current year. Brazil after several trials in the field of political experience has at last found the natural path towards her National aims, pointed out by the traditions of her people and the peculiar kind of problems, now presenting themselves in the country's life.

The great change brought about by the promulgation of the new Constitution on November 10, 1937 may be described as the first constructive revolution, carried out in Brazil's history under the influence of a National idea, inspired by the deliberation of shaping the political institutions in conformity with the conditions determined not only by the traditions, but also by the realities verified in the Nation's present phasis of development.

The first and most important aspect of the great event that so deeply altered the course of Brazil's evolution is the impersonal nature of the reform, so courageously carried out by President Getulio Vargas. The new Brazilian régime is not the outcome of peculiar theoretical political ideas of its author. In framing the new Constitution, President Getulio Vargas realized a thoroughly realistic work, giving to the institutions of the New State a style in perfect harmony with the historical, economic and social conditions of the country.

Such is the reason of the spontaneous movement of public opinion accepting heartily a National organization, whose essential traits correspond so clearly to old aspirations of the Nation. To be able to understand how much the new régime is in conformity with the realities of Brazil's life and adapts itself to the present needs of the country, one must try to obtain a panoramic vision of the historical development of Brazil.

Since the early period of the Portuguese colonization two currents have exercised their influence in opposite directions, as formative forces of the nationality. While interests mostly, or rather, exclusively associated with the exploitation of the country's natural wealth showed a tendency to accentuate the powers of local government, on the other hand a National spirit growing from civic activities, developed within municipal life, began to assert itself, evolving the idea of an united Fatherland. In the several forms of political and administrative organization of the country, which have been successively adopted, the contradictory influence of the two above mentioned currents is perceptible.

The Portuguese King, Dom João III started, thirty three years after the discovery of Brazil by Cabral's fleet, a system of administration on feudal lines.



The coast, mapped out in the previous year by Martim Affonso de Souza, was divided into twelve parts. A territory with the length of sixty leagues towards the hinterland formed upon its costal division an apanage, given by the sovereign to a nobleman of his court. As can be easily seen, such an administrative organization entirely excluded any idea of shaping an united country out of the vast territory of the recently discovered Colony.

Fifteen years later the failure of the "Capitanias" system induced the Lisbon Government to establish a central authority to supervise the country's administration. The first Governor General arrived at Bahia, the only town of a certain importance already existing in Brazil, in 1549. The new régime lasted for nearly three hundred years, some alterations being introduced into it in the course of time, according to circumstances and under pressure of new needs of the administration.

The authority of the Governor General remained throughout the colonial period more symbolical than effective. With the obvious purpose of preventing the unification of the Colony, with the political possibilities arising therefrom, the Metropolitan Government always kept direct administrative connections with the provincial authorities, leaving the Governor General aside in matters that mostly interested the local populations.

The rising of the Governor General to the rank of a Viceroy in the eighteenth century did not alter the aforesaid situation. The Vice-Royalty, both during the short period of experience of a partition of Brazil into two Governments, respectively established in Bahia and Rio de Janeiro, and afterwards when a single Viceroy represented the Portuguese Crown in the later city, was never more than a merely symbolical authority.

While the Portuguese Government insisted on maintaining in the provinces local Governments enjoying to a great extent autonomy from the central Colonial authority, among the people a National conscience was being gradually shaped. The latter current grew little by little, particularly after the economic development of Brazil under the influence of gold and diamond exploitation. In the first decade of the nineteenth century a great event occurred which strengthened the movement towards National unity.

The arrival of the then Regent, Prince Dom João, in Brazil, at the time of the invasion of Portugal by the French troops under Junot, automatically brought about the consolidation of the Brazilian administration into a whole under the direct authority of the royal power. Nine years after the installation of the Portuguese Court in Rio de Janeiro, on the death of the Queen Dona Maria I, Dom João was proclaimed King of Portugal, Brazil and Algarves. According to the new situation thus created, Brazil ceased to be a Colony, becoming a Kingdom on an equal footing with Portugal.

Five years later King Dom João VI and the Royal Family left Brazil, returning to Europe, where political conditions were not satisfactory as a result of the demagogic activities of the Parliament, engaged in the preparation of a Constitution. The heir to the throne, Prince Dom Pedro, remained in Brazil as the King's Lieutenant. In the following year the Prince, complying with the claims of public opinion and following the advice of the great Brazilian statesman José Bonifacio de Andrada e Silva, proclaimed the Independence of Brazil, on the banks of the river Ypiranga in the neighbourhood of the City of São Paulo, on September 7, 1822. Two months later Dom Pedro was crowned Brazilian Emperor in the City of Rio de Janeiro.

A Constituent Assembly was elected early in the following year and met in the new Empire's capital. Under the influence of demagogic currents then



prevailing, the Constituent Assembly became a centre of agitation delaying the work of framing the Constitution. On November 12, 1823 the Emperor dissolved the Constituent Assembly and on March 25, 1824 promulgated a Constitution, immediately submitted to, and accepted by, all the Municipal Councils of the Empire.

That Constitution, altered by amendment in 1834 in the sense of extending the powers of the Provincial Governments, remained in force until 1889, when the monarchical system was abolished and a Republic proclaimed.

In 1891 a Constituent Assembly promulgated the Constitution of the United States of Brazil. The organization then adopted was characterized by two main traits: — the Federal System and the substitution of Presidential Government for the Parliamentary Régime prevailing during the Imperial period. The 1891 Constitution suffered some comparatively slight alterations in 1925, when a few amendments were made in it by the National Congress.

A great National crisis occurred in 1930. Public opinion was for a long time worked on by those discontented with the methods of Government and even with some aspects of the Constitutional organization, particularly those concerning the growing autonomy of the States and the parallel weakening of the National power. A Revolution brought about in connection with the Presidential succession, and, by the way, the first successful revolutionary movement in Brazil since the proclamation of the Republic, took the shape of an unmistakable uprising of the Nation.

President Getulio Vargas, at that time Governor of the State of Rio Grande do Sul and Leader of the Revolution, was entrusted with discretionary powers to organize a new political order. Exercising the dictatorship with the greatest moderation, President Getulio Vargas started a truly gigantic work, reconstructing the National life in all directions. During the three years that elapsed immediately after the Revolution, a thorough renewal was brought about, not only in the administration, but also in the political methods and even in the social atmosphere of the country. Simultaneously a very remarkable work of economic development followed the political and administrative reforms.

On May 3, 1933 a general election took place and on November 15, the Constituent Assembly met to elaborate the second Republican Constitution of Brazil. It is necessary to point out that through an electoral reform, mainly characterized by secret vote and the establishment of a judicature specially entrusted with authority to examine and judge the results of the elections, President Getulio Vargas assured for the first time in Brazil's political history a free and authentic pronouncement of the People through suffrage.

After ten months of debates the Constituent Assembly promulgated a political statute, full of impressive indications of the contradictory political currents represented in same. The lack of touch between the new Constitution and the realities of the National life was soon apparent. Regional points of view and the influences of private interests interfered with Parliamentary work in a still more disturbing manner in the new régime than in the old. All the efforts of the Executive to obtain convenient solutions for several economic problems of the greatest National relevance were counteracted by the slow movements of the Parliamentary machinery.

The increasing difficulties of carrying out the administration under such circumstances were seriously complicated by the dangers arising from the activities of extremist factions, to a great extent inspired and even materially supported by foreign agencies. Political ambitions of certain leaders of local parties in some States and a violent demagogic agitation promoted in connection with

an incoming Presidential election created a most serious National situation. General conditions prevailing in the fields of international politics could not be overlooked, considering the possibilities of a repercussion of a world crisis on vital interests of Brazil.

It was under pressure of such a serious situation and following the aspirations of public opinion that President Getulio Vargas promulgated the new Constitution on November 10, 1937. The National organization established thereby does not represent any breach with what may be accepted as essential in the political traditions of the country. The new State is organized on the basis of true democratic principles and maintains the Federal system adopted in 1891.

Although the idea of State intervention in economical and social matters is introduced as one of the main principles of the new régime, individual rights, private property and absolute personal freedom are safeguarded in the New State to the same extent as in all other democratic countries. The representative system, far from being curtailed, is organized on lines more adequate to the conditions of Brazilian life and likely to assure the free expression of the true will of the People. Everybody acquainted with the real facts will agree that the method of indirect suffrage, established by the new Constitution, corresponds much better than the old one to the realization of an authentic representative system.

There is no room for doubt that the overwhelming majority of the Nation heartily supports the New State and considers the promulgation of the November 10, Constitution as a great service rendered to Brazil by President Getulio Vargas.

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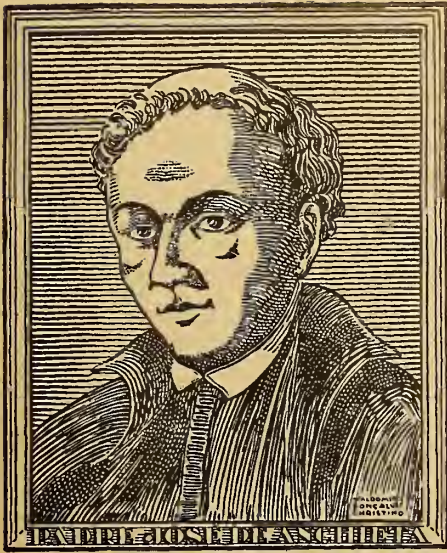
*By Azevedo Amaral*

*OUTSTANDING FIGURES  
IN  
BRAZILIAN HISTORY*





## ANCHIETA



IN the first phase of the formation of Brazilian nationality the singular figure of Anchieta stands out in an unmistakable manner. It is the very personification of all the spiritual values and the one to which Brazil owes the best of its traditions and the backbone of its social structure.

It is not a difficult matter to appraise the dangers that menaced, in its cradle, the organization of the recently discovered Colony.

In order to dispel said dangers it was necessary to have recourse to the continuous activity of the Missionaries, who represented the tireless action of Christianity and of the spiritual principles that constitute the soul of the peoples of

the world and the secret of their vitality.

The work of said fighters was collective, incessant and obscure. If, however, it is possible for any one name to represent, alone, said collective efforts, then that name is: ANCHIETA. No other name possesses a complex of such rare qualities and no other name has become more deeply rooted in popular traditions. Poet and musician, professor and Missionary. great scholar and healer by Divine Power, wherever the welfare of his brothers called him, there he freely dispensed the fruits of his multiform activity. The first classic poems written on American soil, celebrating on the lyre of Lacium the epic feats of his heroes or the Mysteries of Religion, are the product of Anchieta's pen. Anchieta is also the author of the popular songs which used to be sung in our forests, the first rehearsals of our theatre, and, moreover, of the grammar books which attempted to discipline the wild rudeness of the native languages. In the foundation of our great Cities, just as well as at the opening of the first schools, in the noise of battle just as in the diplomatic negotiation of peace treaties, the humble Jesuit stands out as

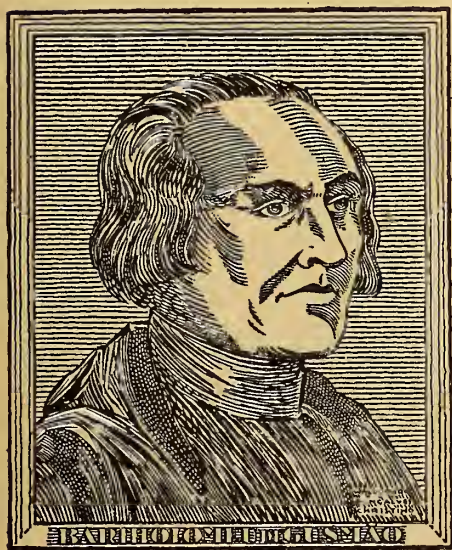
the serene figure of a hero and a saint, the living incarnation of justice and liberty, brotherly love and self-sacrifice, of all that which is right, of patriotism and Christian virtue in the magnificent expansion of its radiant plenitude. The first pages of our history — history of a conquest, which has its lights and its shadows,— are by Anchieta illuminated with the splendour of a placid light, the light of a life which belonged entirely to God and to all of his brothers who constructed the Brazil of today.

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*By Father Leonel Franca S. J.*



## BARTHOLOMEU LOURENÇO DE GUSMÃO



**B**ARTHOLOMEU de Gusmão was born in Santos, Brazil towards the end of December, 1684. He was the son of a Portuguese military surgeon and a Brazilian of an old family of the first Brazilian settlers.

He received his first education in his native village and entered the Jesuit seminary of Belem, as a novice. In 1710 he left the Company of Jesus wishing to become a secular priest.

From his earliest childhood he gave numerous proofs of his remarkable intelligence and wonderful memory. In 1701 he went to Lisbon where he astonished intellectual circles with the exhibition of his learning and talent. He seemed to be a kind of new James Crichton.

Returning to Brazil he finished his studies in Bahia and was ordained priest in the beginning of 1709.

He already had the reputation of being very capable as an inventor, on account of a system of pumps invented by him, with splendid results, for the water supply of his seminary.

In March, 1709, probably, he arrived in Lisbon, wanting to build an aerostatic apparatus invented by him, which employed the effect of air expansion. Being very well received by King John V, he took out a patent and, on August 8 and October 3, 1709 before the sovereign and his court, made experiments with his balloon, a little *montgolfière* that ascended a few metres in the air.

The results were infinitely less than the promises of the inventor in his written application for a patent to the King. Living in an environment scientifically null, incapable of understanding the import of what was to be obtained with his unheard of invention, Gusmão was the butt of a terrible series of attacks

discouraging and covering him with insults and ridicule and, being of timid disposition, he did not recommence his experiments. From that time he was universally called by the nickname of *Padre Voador* (the Flying Priest).

Always enjoying the friendship of John V, he was, therefore, one of the court preachers and one of the crown barristers for important cases. In the meantime he had finished the courses of the University of Coimbra where he received the degree of doctor in canon law.

He was appointed to the Foreign Office and took over the very important task of deciphering the diplomatic code correspondence and the charge of some delicate affairs.

In 1720 he was appointed by John V one of the members of the new Royal Academy of Portuguese History; the following year he received a large annual allowance and his father was ennobled.

A court intrigue, however, in which he took part, ruined his brilliant position in the King's favour.

And as he had the imprudence to be the friend of several Brazilian Jews exiled in Portugal, and was watched by the Inquisition, he was sought for by this redoubtable tribunal. Panicstruck he burned all his papers and fled to Spain at the end of September, 1724.

He arrived in Toledo in a state of great poverty, became seriously ill, and died on November 19 of the same year in the hospital of that town.

Bartholomeu de Gusmão was the first American inventor. When he made his experiments, Bejamim Franklin was only three years old. He is incontestably the forerunner of aerostatics. The five concurring proofs that this book presents were gradually discovered in the Portuguese and Italian archives in 1843, 1868, 1898, 1913 and 1934 and this leaves no doubt on the matter.

They come from two academicians of the Royal Academy of Portuguese History, two very well known writers Leitão Ferreira and Soares da Silva, from the Apostolic Nuncio in Lisbon, Cardinal Conti (Pope Innocent XIII), the Portuguese chronicler Salvador Ferreira, and from an anonymous and violent enemy of the inventor.

It is impossible to deny that Bartholomeu Lourenço de Gusmão's balloon ascended a few metres, by the heating of the air that it contained. The ignorance of the spectators was such that they could not grasp the tremendous importance of this experiment, absolutely new in the annals of Science.

Regarding what some authors affirm, namely that Gusmão realized an ascension in his balloon, it is necessary to explain that there is no contemporary documental proof available.

The well known absurd figure of his balloon that did so much harm to his scientific reputation was the result of a joke.

It was invented by Gusmão himself and printed before the first experiments in Lisbon, August, 1709, and reproduced in Rome and Vienna, in May and June, 1709.

The agreement of the five testimonies quoted above, found after arduous researches, proves without any possible contestation, that Bartholomeu de Gusmão made the first aerostat and effected its first ascension on August 8, 1709.

He was the precursor of the Montgolfier brothers and his name cannot be omitted by anyone that wants to write the History of Sciences, honestly.



## CAXIAS



THE military and political career of Caxias lasted for more than half a century, and all of it was dedicated to his country. The good thoughts with which he was imbued, true Brazilian as he was, became ever greater, surpassing those of the highest in the land, both during the Regency and under the First and Second Empires. Greater than the great Feijó, the sole person he sought to emulate, and who in 1842 tried to start a rebellion in São Paulo, thus acting against the very work of unification and real Brazilian nationalism which he had himself begun ten years before,—the Constitutional loyalty of Caxias followed deeply patriotic lines and was so sincere and open, that

his enemies never dared to call him a pretorian, friend and slave of the munificence easy to obtain from the powers that be by those interested in same. This is a good example for our days.

One could not recriminate Caxias, as Emerson did to Goethe, with the allegation that, having been a man exceptionally well endowed with gifts by God, as he really was,—he had left the world just as he had found it. Brazil of today is a little at least the Brazil of the dreams of Caxias, and the Brazil of Caxias was *not* Brazil as he found it. There falls on us, Brazilians of today, soldiers of today, the mission of making his dream a greater reality, within and ever closer to the radiant trajectory foreseen by the great soldier.

There are all kinds of lives: humble, little, lives wasted in darkness, selfish, empty, hollow, dead. Analyzing same, in many of them one will discover nothing of any good done, no act of self abnegation, not a single noble deed or outburst of enthusiasm. They are lives whose souls were formed in the ambient in which they lived, lives which do not re—create themselves, lives crushed by their

surroundings, lives which are spent and which fade away on the level in which they fearfully tried to rehearse their first timid steps, in an undisguised confession of horror of all the steep obstacles in their way.

The life of Caxias was one full of powerful enthusiasm. In same there resounded and stunned one, in circles of fire, the tumult having its very origin in his existence, in a formidable and creative flow of good intentions and true courses, enclosed and in harmony with the strong, powerful reverberation of the surrounding world. Caxias dominated the ambient in an overpowering manner, giving perforce to same the proper rhythm, implacably and tenaciously building a wall between what should, and what ought not, to figure in said ambient, pursuant to his guiding policy, and commanded, supreme and alone, in a co-ordinated and musical manner, the diabolical orchestre of ambitions which, at that time, faced each other in contrast.

What a resplendent life !

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*By General Goes Monteiro.*

# *PHYSICAL SITUATION*





## BOUNDARIES

### INTRODUCTORY

**W**HEN Portugal and Spain commenced to colonize South America, at the beginning of the XVI Century, the line separating their respective dominions was the one established by the Treaty of Tordezillas, which modified the situation of the meridian defined by the Bull of Pope Alexander VI, moving it from 100 leagues West of the Azores and Cape Verde Islands, to 370 leagues West of the last named islands.

This artificial line, not properly marked out by buoys, having a rather indefinite origin, was not respected and right from the very start gave rise to great controversies. The case of the Molucas, settled by the Saragossa Agreement, of April 22, 1529, and by the transfer of the demarkation line, in Oceania, to 170 leagues East of said islands, made the first breach in said Treaty. Immediately afterwards Spain made another breach, occupying the Philippines. Lusitanian — Brazilian expansion, favoured by the union of the Portuguese and Spanish Crowns (1580-1640) and by the lack of knowledge of the true route of the meridian, completed the inutilization of aforesaid Treaty.

The Independence of Portugal in 1640 and the occupation of the left bank of the River Plate, which the Portuguese considered as the Southern boundary of Brazil, caused struggles and debates, that the two Governments tried to put an end to, by determining in a clear manner the frontiers of their respective Dominions, and by definitively renouncing a line which had become practically unsustainable. The negotiations entered into resulted in the Treaty of Madrid, signed in 1750 and which established the "uti possidetis" principle, of such fruitful and pacific results. This Treaty, in its turn, was derogated by that of the Pardo, on February 12, 1761, which re-established the former "statu quo" because Dom José I, King of Portugal, and Dom Carlos III, King of Spain, did not agree with the exchange of the Sacramento Colony and the left bank of the River Plate, for the Territory of the Seven Eastern Missions of Uruguay.

The struggles between the Portuguese and the Spanish then broke out again, in America, and only terminated with the signing of the Preliminary Boundary Treaty signed at Santo Ildefonso on October 1, 1777. This re-established, from the mouth of the Pipiri-guaçú to the basin of the Amazon, the line described in the Treaty of 1750, but entirely changed the dividing line between the mouth of the Pipiri-guaçú and the sea coast.

The Treaty of Santo Ildefonso was the last one signed between Portugal and Spain regarding the boundaries of their respective Dominions in America.

The Independence of the Spanish Colonies and Brazil transferred to the new Nations the negotiations relating to their respective boundaries.

We managed to settle with our neighbours all the disputes inherited from Portugal and Spain, by means of treaties generally based on the "uti possidetis" principle, already recognized by the Treaty of 1750.

The difficulties which arose in the regularization of the boundaries with French Guiana were also very serious ones, both during the time of the Portuguese dominion and after the Independence of Brazil, but Article VIII of the Treaty of Utrecht finally prevailed, being confirmed by Article 107 of the Treaty of Vienna, on June 9, 1815. Not less laborious and difficult were the negotiations relating to our borders with British Guiana, same being finally fixed through the arbitration of the King of Italy.

All of our boundary disputes are now settled and the demarkation of our extensive and complicated frontier proceeds uninterruptedly. For the better co-ordination of the demarkation work, inspection and conservation of landmarks, the frontiers were grouped in three sectors — North, South and West — each one of them being entrusted to a Commission which operates in conjunction with those of the neighbouring countries.

The Northern Sector comprehends the frontiers of the Guianas and that of Venezuela; the Southern Sector, those of Paraguay, Argentina and Uruguay; and the Western Sector, those of Bolivia, Perú and Colombia.

*By Colonel Renato B. Rodrigues Pereira.*

### ACTS WHICH FIXED THE BOUNDARIES OF BRAZIL

**FRENCH GUIANA :** — Our frontier with French Guiana was defined in Article VIII of the Treaty of Peace and Friendship between John V, King of Portugal, and Louis XIV, King of France, signed at Utrecht on April 11, 1713.

The doubts which arose between Brazil and France regarding the exact meaning of said article were settled by the arbitration decision of the Swiss Federal Council, rendered on December, 1, 1900. The dividing line is formed by the River Oiapoc, from its mouth to its source, and afterwards follows the "divortium aquarum" of the Tumucumaque Range until it intercepts the separation line of the French and Dutch Guianas. The meeting point of the three frontiers has, as co-ordinates : latitude, 2° 20' 15", 24 North; longitude, 54° 36' 4", 33 W.G. The demarkation work is scheduled to commence in 1939.

**DUTCH GUIANA :** — Our boundaries with the Colony of Surinam were fixed by Article I of the Treaty signed in Rio de Janeiro, on May 5, 1906, in the following terms : "The frontier between the United States of Brazil and the Colony of Surinam is formed, from the French frontier to the British frontier, by the dividing line of the waters between the Amazon basin, in the South, and the basins of the water courses that run in a Northerly direction, to the Atlantic Ocean.



The dividing line agreed upon commences at the tri-junction point of the Brazilian, Surinam and British Guiana frontiers, in latitude  $1^{\circ} 55' 44''$ , 9 North and longitude  $56^{\circ} 24' 54''$ , 4 W.G. situated on the dividing point of the Amazon — Corentyne waters and follows, very sinuously, in the general direction of the South — West, passing between the sources of various affluents of the Marapi and Sipaliwini Rivers, until it reaches Mark N. 9, placed between the head waters of the Cuxaré and Sipaliwini Rivers. From this point, always sinuously, it takes a general Northerly direction, separates the waters of the Sipaliwini basin from those of West Perú or Cuminá and attains Morro Grande do Cemiterio, at an altitude of 600 meters. It continues in a generally North-Western direction, passes by the head waters of the small Acae and Camareuni channels, on the Brazilian side, and that of the Chopó, on the Surinam side, and a little further on rapidly turns to the South — East, and then to the East, North and North — East, forming a great open re-entrance to the North, where there are sources of various channels of the Patagai River basin. In a Northwesternly direction it crosses the Ocoimã channel, which provides a means of communication between the villages of the Tirios Indians, situated in the Brazilian channel, and those of the Netherland Indians of the Patagai basin; afterwards passing between the head waters of the Curupini, an affluent of the Western Parú, and those of the Patagai which forms the Sipaliwini, then reaching the region from which starts the counterfort that divides the waters of the Sipaliwini from those of the Tapahoni. It then continues in the general direction of the East, going for long distances towards the North, and sometimes to the South, between the basins of the Palomeu, Olemari and Litani rivers, on the Dutch Guiana side, and those of the Eastern Parú and Jari rivers, on the Brazilian side, until it attains the tri-junction point of the Brazilian, Surinam and French Guiana frontiers, situated between the sources of the Koenimapopane channel, that forms the Koele-Koele, which is, in its turn, an affluent of the Litani, and those of a creator of the Mapaoni, which runs to the South. The frontier crosses mountains whose altitudes attain 735 meters, and a great region of general produce. The frontier is 593 K. 640 in extent and its demarkation has been fully carried out.

**BRITISH GUIANA :—** The frontier with British Guiana is defined in three acts, as follows :

I) Complementary declaration of the Treaty of Arbitration for the settlement of the question of limits between Brazil and British Guiana, signed in London on November 6, 1901;

II) Special Convention, complementary to the frontier agreement, signed in London on November 6, 1926;

III) General Frontier Treaty, signed in London on April 22, 1926. This last act, as regards the definition of the frontier, did no more than gather together the data figuring in the two previous treaties.

The dividing line, starting from the tri-junction point of the Brazilian — Surinam — British Guiana frontiers, runs West by the "divortium aquarum" between the Amazon basin and the Essequibo and Corentyne basins, up to the source of the Tacatú river, on Wamuriakitava mountain; descends the Tacutá as far as the mouth of the Sakontipu up which it goes until it reaches the principal source of same, then going to Iakontipú mountain and from there to Roraima mountain, where frontiers of Brazil, Venezuela and British Guiana meet. The dividing line measures 1,564 kilometers in extent and demarkation has been carried out in full.

VENEZUELA : — The Brazilian — Venezuelan frontier was first defined in Article 2 of the Treaty of Limits and Fluvial Navigation, signed at Caracas on May 5, 1859. This Article includes a stretch of frontier, between the Negro River and the source of the Memachi River, which, in virtue of the arbitration decision of the King of Spain, in the question of the limits between Colombia and Venezuela, ceased to be a Brazilian — Venezuelan boundary. Afterwards the Protocol of July 24, 1928, determining the drawing up and the complete demarkation of the whole frontier, exactly defined the dividing line between the Huá waterfall, in the Maturaca channel, and the Negro River, a stretch regarding which certain doubts arose. In accordance with the two acts cited above, (Treaty of 1859 and Protocol of 1928), the dividing line follows, from the tri-junction point on Roraima, through the dividing lines of the Pacaraima, Parima, Curupira, Tapirapeco and Imeri Ranges, until it reaches Cupi Hill, from where it goes by a geodetical line to the Huá Waterfall and from there to the Negro River "thalweg" in front of the Island of São José, right up to the Brazilian — Colombian frontier. Demarkation work has been done along 244 kilometers of the Brazilian — Venezuelan frontier. This service, which was suspended for several years, owing to the withdrawal of the Venezuelan Commission, was again taken up in November last. The total extent of the frontier is approximately 2,200 kilometers.

COLOMBIA : — Our frontier with Colombia was fixed by two treaties, one signed at Bogotá on April 24, 1907 and the other in Rio de Janeiro, on November 15, 1928, and also through the exchange of Notes, on January 20 and 24, 1934, by the Colombian and Brazilian Governments.

The dividing line commences on the Negro River "thalweg", at the intersection point of the Brazilian — Venezuelan, and Colombian — Venezuelan frontiers. It runs to the North — East in a direct line until it reaches the landmark on the right bank, whose co-ordinates are : latitude  $1^{\circ}13'47''$  North and longitude  $66^{\circ}51'18''$ , 6 W.G., thence, by a geodetical line, in a South-Easterly direction, it goes to the headwaters of the Macacuni River. From this point it follows a sinuous line in the general direction of the North — East through the dividing line of the waters of the Negro River and those of its affluent the River Xié, until it attains the landmark situated between the headwaters of the Tomo River, an affluent of the Guainia and of the Jejú, which in its turn is an affluent of Japeri. It continues through the "divortium aquarum", in the general direction of the West, passing by Caparro Hill, until it reaches the landmark placed between the headwaters of the Memachi River to the North, and those of the Major Pimentel River, to the South. It descends the Major Pimentel River to its confluence with the Inaná, which it descends until it reaches the confluence of same with the Cuiari, along which it continues until it reaches the parallel of its confluence with the River Pegua. Along this parallel it goes on to the River Içana, going up same as far as its intersection with the confluence meridian of the Rivers Querari and Uaupés, following the meridian up to said confluence, descending the Uaupés to the mouth of the Papuri River, ascending same to intercept the meridian of the principal headwaters of the Taraira River, following aforesaid meridian up to above mentioned headwaters, descending the Taraira and the Apaporis to the Japurá River, whose "thalweg" it follows as far as its intersection with the Tabatinga — Apaporis geodetical line. Along this line it goes to the headwaters of the channel of Santo Antonio, through which it descends until it reaches the mouth of the Solimões or Amazon. Total extent of the frontier : 1,643,380 Km.



**PERU :—** The frontier between Brazil and Perú was fixed in Article 7 of the Special Convention on Commerce, Navigation and Boundaries, signed at Lima on October 23, 1851, and in Article 1 of the Treaty signed in Rio de Janeiro on September 8, 1909. The last named agreement defined the dividing line as starting from the sources of the Javari River and going on to the Bolivian frontier, at the confluence of the River Acre with the Javerija channel, its affluent on the right bank. From said confluence, the dividing line follows the River Acre up to its principal source, going from there in a straight line, 12,336, M, 12 in extent drawn along the 53°33'47" 2 South — West course, to the intersection point of the 11° parallel with the meridian of the principal source of the Chambuiaco River; by said meridian it reaches aforesaid source, descends the Chambuiaco as far as its confluence with the Purús River, in which it enters on the right bank, then descending the Purús to the mouth of the Santa Rosa River, its left bank affluent, ascending the Santa Rosa River as far as its principal headwaters, continuing through the "divortium aquarum" between the waters that run to the Embira and those that flow to the Curanja and other tributaries of the left bank of the Purús River, until the point where same meets parallel 10°, latitude South, following said parallel, towards the West, until it reaches the dividing line that separates the waters which flow to the Alto Juruá, to the West, from those which run to the same river, to the North, leaving the headwaters of the Tarauacá and those of the Jordão, on the Brazilian side, and those of the Piqueyaco and Turulhuc on the Peruvian side. It goes along said dividing line to the source of the Breu River, going down to the mouth of same in the Juruá River, situated on the right bank, continuing, along the parallel of said river mouth, in a Western direction until it encounters the dividing line of the waters of the Ucaiale and Juruá Rivers, through which it continues, towards the North, until it reaches the head waters of the Javari River. It then descends the Javari to its mouth on the right bank of the Amazon, by the "thalweg" of which it ascends as far as a point in front of the Santo Antonio Channel, at Tabatinga. From the source of the Javari to the Santo Antonio River, the frontier is that which is defined by the Treaty of 1851. Total extent of the frontier : 2,988 Km. Demarkation work has been completed on same.

**BOLIVIA :—** Our frontier with Bolivia has been defined in three acts :

- I) The Treaty signed at La Paz on March 27, 1867;
- II) The Treaty signed at Petropolis on November 17, 1903;
- III) The Treaty signed at Rio de Janeiro on December 25, 1928. Starting from the South, in front of the Baía Negra waterway, the dividing line ascends the Paraguay River as far as the landmark placed on its right bank, 9 Kilometers away, in a direct line, to Coimbra Fort, continuing from this point along a geodetical line following the true course of 50°40'58" North, to the landmark situated 4 kilometers to the North — East of the landmark denominated Marco do fundo da Baía Negra. It continues in a North — East direction until it intercepts parallel 19°02' South, and, adjusted to same, it attains, in the East, Conceição brook, down the bed of which it descends as far as its mouth, on the Southern bank of the Caceres Lake water-way; ascending same, which is also denominated Tamengo River, up to the tip of the Tamarindeiro, which it follows in a Northern direction until it reaches parallel 18° 54' South. It follows this parallel until it reaches longitude 57°46' W.G. thence following a North — Eastern course to parallel 18°14' South; it follows same as far as the Mandioré Lake water-way, which it ascends, crossing aforesaid lake to its Northern bank, and goes on in a North — Eastern direction

to intercept parallel 17° 49' South. It runs along this parallel until it encounters the meridian at the South — Western extremity of Gaíba Lake, and following said meridian, crosses the lake in a straight line, attaining the Pedro II channel or River Pando, along which it runs until it enters Lake Uberaba. It crosses the Uberaba from end to end, going on to the Southern extremity of the Corixa Grande do Destacamento; it follows said canal to its origin in the Borborema Range, from whence it goes to São Matias Hill. It descends the hill to the Corixa de São Matias, along which canal it runs to the junction of same with that of the Peinado, thence in a straight line, in a Western direction, to Boa Vista Hill and the Quatro Irmãos landmark. Thence in a North — Eastern direction in a straight line to the landmark placed in 1877 at the confluence of the two arms forming the Turvo River, an affluent of the Paragaú. Along the parallel of this landmark, towards the East, it goes on to intercept the straight Quatro Irmãos line — Source of the Verde River, following said straight line to the North, up to aforesaid source, it descends the Verde, Guaporé, Mamoré and Madeira Rivers to the mouth of the Abunã. It ascends the Abunã to the mouth of the Rapirran, continuing to ascend same to its source, whence, in a direct line, it goes on to the mouth of the Chipamonu, along which it continues to the source of same. From this point it continues in a straight line to the source of the Eastern arm of the narrow Baía channel; it descends said arm, then descending aforesaid channel as far as the River Acre, which it ascends to the confluence of the Iaverija, meeting point of the Brazilian — Bolivian — Peruvian frontiers. Demarkation work has been done along the whole extent of this frontier, with the exception of the stretches figuring in the Treaty of December 25, 1928, *i. e.*, from the source of the Rapirran to the source of the narrow Baía channel, and from the Turvo landmark to the source of the River Verde. The total extent of this frontier is about 5,240 kilometers.

URUGUAY : — The frontier between Brazil and Uruguay is defined in the following acts :

- I) The Treaty of Rio de Janeiro, signed on October 12, 1851;
- II) The Treaty of Montevideo, signed on May 15, 1852;
- III) The Montevideo Agreement, of April 22, 1853;
- IV) The Treaty of Rio de Janeiro, signed on October 30, 1909;
- V) The Rio de Janeiro Convention, signed on May 7, 1913;

As regards the Agreement of 1853, properly speaking it did not fix a single stretch of the frontier; but only made clear the terms of the Treaty of 1852, or rather, explained with greater exactitude the dividing line stipulated in same. The Uruguayan-Brazilian boundary commences in the mouth of the Chui brook; it goes along same to its general ford; thence to the general ford of the São Miguel brook, and along same to Mirim Lake, which it crosses longitudinally to Rabotieso Point, continuing in a North — Eastern direction until it passes between the Taquari Islands, leaving, on the Brazilian side, the most Eastern island and the two islets near to same, attaining afterwards the deepest channel, in the proximity of Parobé Point, along which it goes until it gets in front of Muniz Point on the Uruguayan bank, and Ponta dos Latinos or Fanfa Point, on the Brazilian bank. From this intermediate point, and passing between Muniz Point and the Brazilian island of Juncal; it goes to the mouth of the Jaguarão. It follows the Jaguarão, Jaguarão-Chico and afterwards the Mina brooks to source, whence, by a geodetical line it goes to the mouth of the



São Luiz brook, in the Negro River. It goes up this brook to its source, crossing São Luiz Lake; it then climbs the dividing line of the little Sant'Ana Mountain, continuing along same, separating the City of Sant'Ana from that of Rivera, reaches the dividing line of the little Haedo Mountain, which it follows to the source of the Invernada rivulet; descending the Invernada and afterwards the Quarahim River to its mouth in the River Uruguay, where it ends, after leaving Brasileira Island, within the Brazilian boundary. The length of this frontier is : 890 Km. 523, and the demarkation work has been completed.

**PARAGUAY :—** Our frontier with Paraguay was defined in two Treaties. The first one was signed at Assumption on January 9, 1872, and the second, or complementary one, at Rio de Janeiro on May 21, 1927. The dividing line, according to these two instruments, follows the mouth of the Iguacú through the bed of the River Paraná to the fifth fall of the Sete Quedas waterfall; from this point it takes a Western direction, following the dividing line of the waters of the Maracajú Range to its junction, in the source of the Iguatemi, with the Amambái Range; it follows the dividing line of same and, after separating the Brazilian town of Pontaporã from the Paraguayan town of Pedro Juan Caballero, attains the source of the Estrela rivulet, principal branch of the River Apa, down which it goes to its mouth in the River Paraguay. Finally it ascends the bed of same to the Baía Negra water-way, on its right bank. The extent of this frontier is : 1,284 kilometers, and demarkation work has been done along 1,074 Kms. of same. Ninety kilometers of the dry land stretch have been surveyed and the work of demarkation and distribution of the islands, continues to be done.

**ARGENTINA :—** The Treaty signed in Rio de Janeiro on October 6, 1898, in consequence of the arbitration decision of President Cleveland, in the controversy between Brazil and Argentina, defined their frontiers almost entirely, causing them to go from the mouth of the Quarahim to the North, through the River Uruguay, and afterwards through the Pepiri-guaçú to its source; thence through the highest lands, to the principal headwaters of the River Santo Antonio; following same to its mouth in the Iguacú and then following same to its junction with the River Paraná. The definition of the frontiers was completed by the Complementary Convention of Boundaries, signed in Buenos Aires on December 27, 1927, by which the dividing line was fixed from the mouth of the Quarahim to the South, as far as the South-Western end of Brasileira Island. On this short stretch, of about six kilometers in length, the frontier commences on the normal line between the two banks of the Uruguay and a little below said point; it ascends the river in the middle of its navigable channel, between the right or Argentine bank, and the Western and Northern shores of aforesaid island, until it encounters the line which joins the two landmarks inaugurated on April 4, 1901; the Brazilian landmark on the Quarahim bar, and the Argentine one, on the right bank of the River Uruguay, where the part of the frontier fixed in the Treaty of 1898, commences. The Convention of 1927 still depends upon the approval of the Legislative Power of the Argentine Republic. Only said short stretch is lacking to complete the demarkation work. The frontier on which demarkation work has been done has an extent of 1,232 kilometers.

## SUPERFICIES

THE very physical greatness of Brazil, creating by the multiplicity of aspects of the territory, enormous difficulties for the geodetical triangulation operations — has contributed more than anything else to prevent us from possessing really accurate data on the territorial extent of the country. The geographical exploration work done up to now for said purpose has not, strictly speaking, covered the entire area over which the National sovereignty is exercised, hence the disparities sometimes encountered — even though they represent differences of but a few kilometers — in the figures divulged regarding our territorial superficieses.

The elements presented in this chapter and which are, by the way, those figuring in the publications of the “Instituto Brasileiro de Geografia e Estatística” (Brazilian Institute of Geography and Statistics), correspond to the results arrived at by the “Clube de Engenharia do Rio de Janeiro” (Engineering Club of Rio de Janeiro), on drawing up the “Carta Geral do Brasil” (General Map of Brazil) in commemoration of the Centenary of Brazilian Independence. According to said data, the total area of the country is 8,511,189 square kilometers. As regards territorial extent, Brazil occupies the sixth place on the list of Nations, its territory corresponding to 1.7 % of the earth’s surface and to 47.8 % of that of South America. Taking into consideration only continuous lands, *i. e.*, Nations having an uninterrupted extent of territory, we will figure in the fourth place on said list, Russia, China and the Dominion of Canada occupying respectively the first, second and third places.

With regard to the deficiency hereinbefore mentioned of cartographical data as far as possible exact, it is only fair to stress, at this point, the far-reaching effect and the importance of the initiatives now being taken by the co-ordinating organ of the Brazilian statistical and geographical services: the “Instituto Brasileiro de Geografia e Estatística” (Brazilian Institute of Geography and Statistics).

Besides the results obtained, in order to have perfect knowledge of our territory and so that there be fully known the rationalization process to which the administrative and judiciary divisions of the country were submitted, as the reader will see further on, in the part of this book relating to territorial division, various other measures are being carried out, so that in 1940, the year in which the next General Census is going to be taken, there will have been already attained in full, among others, the following objectives: a) — the revision of the area of Brazil and its division according to the Federated Units and Municipalities, there being also effected, if possible, the computation of the District areas; b) — the systematic description of the boundaries of the Municipalities and Districts; c) — the revision to the millionth of the General Map of Brazil; d) — the elaboration of the Municipal Statistical and Chorographical Atlas; e) — the computation of the urban area and population of the Municipal and District seats, together with the survey of the respective buildings.

One of these items has already taken concrete form as a consequence of the rationalization of the territorial division referred to above and which was carried out pursuant to Decree N. 311, issued in March, 1938: the item relating to the systematic description of the boundaries of Brazilian Municipalities and Districts. Said Decree fixed a term, which was afterwards prorogued to December 1939, for the Municipalities to proceed with the drawing up of their res-

pective maps. Aforesaid work, which must, throughout the country, comply with a stated minimum of requirements, established by the "Conselho Nacional de Geografia" (National Council of Geography), will also be a valuable contribution towards the perfect knowledge of our territory, facilitating the revision to the millionth of the General Map of Brazil, that said Council is carrying out.

### GEOGRAPHICAL POSITION OF BRAZIL

#### Location of extreme points

COMPASS POINT PLACE	COORDINATES	
	Latitude	Longitude (W. Gr.)
North..... Landmark B/BG/11A on the Caburaí Range in the State of Amazonas (1).....	5°16'19",60 N.	80°12'43",29
South..... Point on the Chu brook in the State of Rio Grande do Sul.....	33°45'09",00 S.	53°25'21",00
East..... Ponta de Pedras in the State of Pernambuco.....	7°34'51",00 S.	34°45'54",09
West..... Contamansas Mountain Range in the Territory of Acre (2)....	7°33'12",82 S.	73°59'32",45

- (1) Brazilian-British Joint Committee, 1936.  
 (2) Brazilian-Peruvian Joint Committee, 1913-1928.

#### Distances between the extreme geographical lines

SPECIFICATION		NUMERICAL DATA
N. — S. Direction	Extreme Latitudes.....	On the North..... 5°16'19",60 N.
		On the South..... 33°45'09",00 S.
	Difference.....	In angle..... 39°01'28",60
		In kilometers..... 4,319.2
E. — W. Direction	Extreme Longitudes.....	On the East..... 34°45'54",00 W. Gr.
		On the West..... 73°59'32",45 W. Gr.
	Difference.....	In angle..... 39°13'38",45
		In kilometers..... 4,327.6



## AREA OF BRAZIL AND ITS FEDERATED UNITS

FEDERATED UNITS	AREA ACCORDING TO FLORISTIC DISTRIBUTION							Other areas	Total area
		Woods	Thickets	Bushlands	Seaboard vegetation	Prairies	Lowlands subject to floods	Marshes	
Territory of { km. <sup>2</sup>	148,027	—	—	—	—	—	—	—	148,027
Acre..... { %	100.00	—	—	—	—	—	—	—	100.00
Amazonas..... { km. <sup>2</sup>	1,741,961	—	—	—	69,071	14,965	—	—	1,825,997
{ %	95.40	—	—	—	3.78	0.82	—	—	100.00
Pará..... { km. <sup>2</sup>	1,025,300	173,120	15,010	44,980	38,904	43,410	—	17,242	1,362,966
{ %	75.23	13.07	1.10	3.30	2.85	3.18	—	1.27	100.00
Maranhão..... { km. <sup>2</sup>	199,702	39,071	19,535	16,713	45,800	25,396	—	—	346,217
{ %	57.63	11.28	5.64	4.83	13.23	7.34	—	—	100.00
Piauí..... { km. <sup>2</sup>	92,652	37,223	57,045	1,211	57,451	—	—	—	245,582
{ %	37.73	15.16	23.23	0.49	23.29	—	—	—	100.00
Ceará..... { km. <sup>2</sup>	80,904	—	51,765	10,931	4,991	—	—	—	148,591
{ %	54.45	—	34.84	7.35	3.36	—	—	—	100.00
Rio Grande do { km. <sup>2</sup>	10,877	—	34,100	7,434	—	—	—	—	52,411
Norte..... { %	20.75	—	65.06	14.19	—	—	—	—	100.00
Paraíba..... { km. <sup>2</sup>	14,768	—	36,832	2,751	1,569	—	—	—	55,920
{ %	26.41	—	65.87	4.92	2.80	—	—	—	100.00
Pernambuco.. { km. <sup>2</sup>	23,305	—	65,802	4,044	1,103	—	—	—	99,254
{ %	28.52	—	66.30	4.07	1.11	—	—	—	100.00
Alagoas..... { km. <sup>2</sup>	4,305	—	18,200	6,066	—	—	—	—	28,571
{ %	15.07	—	63.70	21.23	—	—	—	—	100.00
Sergipe..... { km. <sup>2</sup>	6,103	—	10,298	3,242	1,909	—	—	—	21,552
{ %	28.32	—	47.78	15.04	8.86	—	—	—	100.00
Baía..... { km. <sup>2</sup>	192,354	62,383	204,139	21,545	48,958	—	—	—	529,379
{ %	36.34	11.78	38.56	4.07	9.25	—	—	—	100.00
Espírito Santo { km. <sup>2</sup>	34,018	—	—	7,245	1,207	2,214	—	—	44,884
{ %	76.13	—	—	16.21	2.70	4.96	—	—	100.00
Rio de Janeiro { km. <sup>2</sup>	35,469	—	—	4,801	2,134	—	—	—	42,404
{ %	83.65	—	—	11.32	5.03	—	—	—	100.00
Federal District { km. <sup>2</sup>	768	—	—	—	101	—	—	300	1,167
{ %	65.64	—	—	—	8.65	—	—	25.71	100.00
São Paulo..... { km. <sup>2</sup>	179,828	28,662	991	—	38,566	1,192	—	—	247,239
{ %	72.74	11.59	0.40	—	14.79	0.48	—	—	100.00
Paraná..... { km. <sup>2</sup>	155,768	23,825	—	—	20,304	—	—	—	199,897
{ %	77.92	11.92	—	—	10.16	—	—	—	100.00
Santa Catarina { km. <sup>2</sup>	71,709	3,677	—	1,634	17,978	—	—	—	94,998
{ %	75.48	3.87	—	1.72	18.93	—	—	—	100.00
Rio Grande do { km. <sup>2</sup>	98,327	4,352	—	11,077	131,986	21,758	—	17,789	285,289
Sul..... { %	34.47	1.53	—	3.88	46.26	7.63	—	6.23	100.00
Mato Grosso... { km. <sup>2</sup>	645,929	473,250	42,664	—	175,611	21,823	117,764	—	1,477,041
{ %	43.73	32.04	2.89	—	11.89	1.48	7.97	—	100.00
Goiás..... { km. <sup>2</sup>	251,509	248,336	68,783	—	80,177	2,951	8,437	—	660,193
{ %	38.10	37.61	10.42	—	12.14	0.45	1.28	—	100.00
Minas Gerais.. { km. <sup>2</sup>	306,852	173,247	44,098	—	69,613	—	—	—	593,810
{ %	51.68	29.17	7.43	—	11.72	—	—	—	100.00
BRAZIL..... { km. <sup>2</sup>	5,325,433	1,272,146	669,262	143,674	805,433	133,709	126,201	35,331	8,511,189
{ %	62.57	14.95	7.86	1.69	9.46	1.57	1.48	0.42	100.00

Notes — The table was organized in accordance with the map denominated "Mapa Fitogeográfico do Brasil", to scale 1:4,500,000, published in 1926 by the "Museu Nacional" (National Museum) and organized by J. Cezar Diogo.

## AREA OF BRAZIL AND ITS FEDERATED UNITS

Comparison between the area of the Municipalities of the Capitals and the average size of the Municipal areas (on December 31, 1936)

FEDERATED UNITS	TOTAL AREA		MUNICIPAL DIVISION			MUNICIPALITY OF THE CAPITAL		
	Km. <sup>2</sup> (a)	%	Number of Muni- cipalities	AVERAGE AREA		DESIGNATION	AREA	
				Km. <sup>2</sup> (b)	$\frac{100 \text{ b}}{\text{a}}$		Km. <sup>2</sup> (c)	$\frac{100 \text{ c}}{\text{a}}$
Territory of Acre.....	148,027	1.74	5	29,605	20.00	Rio Branco.....	24,408	16.49
Amazonas.....	1,825,997	21.45	28	65,214	3.57	Manaus.....	47,874	2.62
Pará.....	1,362,966	16.01	50	27,259	2.00	Belém.....	4,374	0.32
Maranhão.....	346,217	4.07	65	5,326	1.54	São Luiz.....	1,188	0.34
Piauí.....	245,582	2.88	44	5,581	2.27	Teresina.....	2,422	0.99
Ceará.....	148,591	1.75	77	1,980	1.30	Fortaleza.....	457	0.31
Rio Grande do Norte...	52,411	0.62	42	1,248	2.38	Natal.....	262	0.50
Paraíba.....	55,920	0.66	39	1,434	2.56	João Pessoa.....	870	1.56
Pernambuco.....	99,254	1.17	84	1,182	1.19	Recife.....	180	0.18
Alagoas.....	28,571	0.34	36	794	2.77	Maceió.....	367	1.28
Sergipe.....	21,552	0.25	41	526	2.44	Aracaju.....	440	2.04
Baía.....	529,379	6.22	151	3,506	0.66	Salvador.....	550	0.10
Espírito Santo.....	44,684	0.52	32	1,396	3.12	Vitória.....	213	0.48
Rio de Janeiro.....	42,404	0.50	49	865	2.08	Niterói.....	71	0.17
Federal District.....	1,167	0.01	1	1,167	100.00	—	—	—
São Paulo.....	247,239	2.90	253	977	0.40	São Paulo.....	1,455	0.59
Paraná.....	199,897	2.35	56	3,570	1.79	Curitiba.....	485	0.24
Santa Catarina.....	94,998	1.12	43	2,209	2.33	Florianópolis.....	352	0.37
Rio Grande do Sul.....	285,289	3.35	86	3,317	1.16	Porto Alegre.....	470	0.16
Mato Grosso.....	1,477,041	17.35	26	56,809	3.84	Cuiabá.....	215,500	14.58
Goiás.....	660,193	7.76	55	12,004	1.82	Goiânia.....	9,648	1.46
Minas Gerais.....	593,310	6.98	215	2,762	0.47	Belo Horizonte.....	363	0.06
<b>BRAZIL.....</b>	<b>8,511,189</b>	<b>100.00</b>	<b>1,478</b>	<b>5,759</b>	<b>0.07</b>	<b>Rio de Janeiro.....</b>	<b>1,167</b>	<b>0.01</b>

## STANDARD TIME

ON standard time being established for Brazil, pursuant to the system of time zones, efforts were made to assure the most uniform distribution possible, by means of a proper demarkation of said time zones. In accordance with the provision of the Regulations governing the matter, in force since January 1934, Standard time for the whole country, with the exception of in the States of Amazonas and Mato Grosso, in part of the State of Pará, in the Territory of Acre, Fernando de Noronha Archipelago and in the Island of Trindade, is the same as that in force in the Federal Capital.

Standard time in Rio de Janeiro is 7m.6s.4 behind Greenwich time. Twice a day, at 11 a. m. and at 9 p. m., the National Observatory broadcasts Standard time. For local information and principally for the use of ships in harbour, signal lights are shown, every evening at 9 p. m., at the signal tower on São Januario hill.

### GEOGRAPHIC DISTRIBUTION OF STANDARD TIME

DIFFERENCE BETWEEN LOCAL AND GREENWICH TIME	BRAZILIAN REGION COMPREHENDED	AREA	
		Km. <sup>2</sup>	%
— 2 hours.....	Fernando Noronha and Trindade Islands.....	75	0.001
— 3 hours.....	Federated Units:— Maranhão, Piauí, Ceará, Rio Grande do Norte, Paraíba, Pernambuco, Alagoas, Sergipe, Baía, Espírito Santo, Rio de Janeiro, Federal District, São Paulo, Paraná, Santa Catarina, Rio Grande do Sul, Goiás, Minas Gerais, and the part to the East of the line that, starting from Mount Crevaux, on the French Guiana frontier, follows the channel of the Pecuari river as far as the Jari, following the bed of this river until it reaches the Amazon, continuing Southwards, through the channel of the Xingú, until it enters the State of Mato Grosso.	4,344,712	51.047
— 4 hours.....	Federated Units:—Mato Grosso; the part of the Amazonas to the East of the geodetical line which, starting from Tabatinga, goes to Porto Acre, both of these places being within the 4 hours time difference belt; and the part of the State of Pará to the West of the line starting from above mentioned Mount Crevaux.	3,814,158	44.813
— 5 hours.....	Federated Units:—Territory of Acre and the part of the Amazonas to the West of the geodetical line cited above.	352,244	4.139
	TOTALS.....	8,511,189	100.000

## GEOLOGY AND OROGRAPHY

## DISTRIBUTION OF THE AREA OF BRAZIL, BY GEOLOGICAL ERAS AND SYSTEMS

ERAS AND SYSTEMS		NUMERICAL DATA	
		Km. <sup>2</sup>	%
Cenozoic.....	Quaternary.....	790,585	9.29
	Neogene.....	1,364,856	16.04
	Eogene.....	824	0.01
	TOTAL OF THE ERA.....	2,156,265	25.43
Mesozoic.....	Cretaceous.....	686,115	8.06
	Triassic.....	773,226	9.09
	TOTAL OF THE ERA.....	1,459,341	17.15
Palaeozoic.....	Permian.....	483,331	5.68
	Carboniferous.....	32,292	0.38
	Devonian.....	47,178	0.55
	Silurian.....	365,822	4.30
	Presilurian.....	4,449	0.05
	Eopalaeozoic.....	372	0.04
	TOTAL OF THE ERA.....	933,444	10.97
Proterozoic.....	Algonkian.....	309,377	3.63
Archaeozoic.....	Archaeon.....	2,755,018	32.37
Unclassified areas.....		897,744	10.55
TOTAL.....		8,511,189	100.00

Note — In adding up the areas of the quaternary and neogene systems, the figures for the holocene-pliocene lands in Rio Grande do Sul and Santa Catarina were divided into equal parts.

## HIGHEST POINTS IN BRAZIL (AT ELEVATIONS OF 1,500 METRES AND OVER)

DESIGNATION	SITUATION		Altitude (M)
	Orographic forms	Federated Units and bordering Countries	
Pico da Bandeira.....	Serra do Caparaó.....	Minas Gerais — Espírito Santo.....	2,884
Pico do Monte Roraima.....	Sistema Guiano.....	Amazonas — Venezuela — British Guiana.....	2,875
Pico do Cruzeiro.....	Serra do Caparaó.....	Minas Gerais — Espírito Santo.....	2,861
Pico do Cristal.....	Serra do Caparaó.....	Minas Gerais.....	2,798
Pico das Agulhas Negras.....	Serra da Mantiqueira.....	Minas Gerais — Rio de Janeiro.....	2,787
Cerro Masiati.....	Sistema Guiano.....	Amazonas — Venezuela.....	2,506
Pico de Marins.....	Serra da Mantiqueira.....	São Paulo.....	2,422
Pedra Furada.....	Serra da Mantiqueira.....	Minas Gerais — Rio de Janeiro.....	2,323
Pico de Itaguaré.....	Serra da Mantiqueira.....	Minas Gerais — São Paulo.....	2,308
Pedra do Sino.....	Serra dos Orgãos.....	Rio de Janeiro.....	2,245
Pedra Agui.....	Serra dos Orgãos.....	Rio de Janeiro.....	2,232
Mitra do Bispo.....	Serra da Mantiqueira.....	Minas Gerais.....	2,195
Morro da Boa Vista.....	Serra da Bocaina.....	São Paulo.....	2,070
Pico da Carapuça.....	Serra do Caparaó.....	Minas Gerais.....	1,955
Pico do Itambé.....	Serra do Itambé.....	Minas Gerais.....	1,876
Pico das Almas.....	Serra do Joazeiro.....	Baía.....	1,850
Pedra Branca.....	Serra da Pedra Branca.....	Minas Gerais.....	1,800
Pico de Itacolomi.....	Serra de Ouro Branco.....	Minas Gerais.....	1,797
Pico da Piedade.....	Serra de Piedade.....	Minas Gerais.....	1,783
Frade de Macaé.....	Serra de Macaé.....	Rio de Janeiro.....	1,750
Pico do Buriti Quebrado.....	Chapada Diamantina.....	Baía.....	1,707
Dedo de Deus.....	Serra dos Orgãos.....	Rio de Janeiro.....	1,695
Chapada dos Veadeiros.....	Chapada dos Veadeiros.....	Goiás.....	1,678
Pico do Tinguá.....	Serra do Tinguá.....	Rio de Janeiro.....	1,650
Pico de Itabira do Campo.....	Serra do Cavalo de Pedra.....	Minas Gerais.....	1,573
Pico do Taíó.....	Serra do Espigão.....	Santa Catarina.....	1,500



## CLIMATE

**T**HE Climate of Brazil is, in general, mild and healthy, although the country is situated between the Tropic of Capricorn and the Equator. Only three States in the extreme South: Rio Grande do Sul, Santa Catarina and Paraná, besides a part of São Paulo, are below the tropics.

The Southern States have a climate very similar to that of Europe. Even in the North, which is the hottest region of Brazil, people from cold or temperate climates adapt themselves perfectly to the climatological conditions, just as happens in the East and West Indies and in Africa. In the XVII Century, a great part of the North-East was under the dominion of Dutch, who only left Brazil after being completely defeated. The climate of the Amazonian region, so badly spoken of by some travellers, has illustrious defenders, such as Bates, Wallace, Paul Leconte and many others, who consider it excellent.

Climatologists consider that there are three different climatic zones in Brazil: 1st — the tropical, torrid or equatorial zone; 2nd — the sub-tropical or hot zone; 3rd — the temperate or mild zone.

The first zone, which lies between the Equator and parallel 10° comprehends the States of Amazonas, Pará, Maranhão, Piauí, Ceará, Rio Grande do Norte, Paraíba, Pernambuco, Alagoas and part of Goiás, Mato Grosso and Baía. The average temperature, in this zone, is from 26° C. to 27° C.

The second zone lies between parallel 10° and the tropic of Capricorn, there being included in same the States of Sergipe, Baía, Goiás, Espírito Santo, Rio de Janeiro, Minas Gerais, almost all of Mato Grosso and the Eastern part of São Paulo. The average temperature in this zone is from 23° C. to 26° C., but in the highest regions it oscillates between 18° C. and 21° C.

The third zone commences in the Tropic of Capricorn and ends at the Southern extremity of the country, comprehending the Southern part of the State of São Paulo and the States of Paraná, Santa Catarina and Rio Grande do Sul. The average temperature varies, in this last named zone, between 16° C. and 19° C. (19° C. along the coast and 16° C. up country).

These different zones can be sub-divided into as many separate parts as there are meteorological phenomena which, altogether, make up our different kinds of climate.

The tropical zone is sub-divided into three others: super-humid, continental humid and semi-arid. In this last named one are to be found the regions subject to prolonged droughts, in the North-East of Brazil.

The climate of the sub-tropical zone comprehends two sub-divisions: semi-humid maritime and semi-humid continental. The first named sub-division has as a distinguishing feature its small variation of temperature, while the second one has as an outstanding characteristic a considerable temperature variation.

The temperate climate zone is sub-divided into three types of climate: the super-humid of the coast, semi-humid of the interior and the semi-humid of the highlands.

Minimum temperatures have reached 10° C. below zero, at Palmas, a Municipality in the State of Paraná, situated at an altitude of 1,155 meters, an identical drop in the temperature having also being registered at Campos de Jordão, in the State of São Paulo. At Curitiba, in the State of Paraná, a temperature of 9° C. below zero, accompanied by snow, has been recorded, the same occurrence having, moreover, been registered at other points in the third zone.



# YEARLY METEOROLOGICAL OBSERVATIONS TAKEN AT THE CITY OF RIO DE JANEIRO IN 1937

Data on barometric pressure, temperature and air humidity

MONTHS	OBSERVATION										
	Barometric pressure at 0° C	TEMPERATURE IN THE SHADE (Centigrade)									
		Mean maximum	Mean minimum	Absolute maximum		Absolute minimum		Compensated average	Wet thermometer	Air humidity	
				Degree	Date	Degree	Date			Tension of vapour	Relative humidity (%)
I.....	754.3	25.3	21.7	33.5	22	18.4	16	23.7	21.8	18.6	86.2
II.....	54.8	28.2	23.1	34.3	14	19.2	5	25.7	23.0	18.8	78.2
III.....	54.9	29.2	22.4	35.2	17	19.6	28	25.3	21.7	18.9	70.9
IV.....	57.5	26.1	20.9	32.4	10	18.4	14	23.5	21.1	16.5	76.3
V.....	59.0	24.2	18.7	28.8	16	14.1	25	21.2	18.9	14.9	80.2
VI.....	60.5	25.4	17.9	30.7	26	15.2	4	21.1	18.4	14.4	77.6
VII.....	61.2	25.3	18.1	31.2	19	15.0	30	21.2	18.0	13.2	72.4
VIII.....	58.5	27.0	18.7	31.6	9	15.5	27	22.3	18.9	14.1	71.1
IX.....	59.6	23.6	17.7	27.8	18/22	15.9	3	20.4	17.7	13.1	72.3
X.....	57.0	23.7	19.1	29.5	8	16.5	22	21.5	18.9	14.5	79.4
XI.....	56.0	23.7	19.8	33.6	16	16.1	19	21.7	19.8	16.0	81.6
XII.....	55.1	26.2	21.0	34.2	2	17.1	15	23.4	20.8	16.8	80.9
YEAR.....	757.4	25.7	19.9	35.2	17/3	14.1	25/5	22.6	19.9	15.6	77.3

Data on cloudiness rainfall wind, evaporation and insolation

MONTHS	OBSERVATION								
	Cloudi- ness (0-10)	RAINFALL			WIND			Total evapora- tion (m/m)	Total insolation (hour and tenths)
		Total height (m/m)	Maximum in 24 hours		Prevailing directions		Velocity in m. p. e. (l)		
			Height (m/m)	Date					
I.....	6.8	147.1	28.7	24	C.	SSE	2.0	61.4	182.1
II.....	3.4	56.7	21.1	3	C.	SSE	1.0	86.5	271.2
III.....	4.1	32.3	9.0	18	C.	SSE	2.3	124.3	264.8
IV.....	6.5	61.3	15.5	10	C.	SSE	1.5	86.1	204.7
V.....	5.9	131.7	20.8	4	C.	S	2.2	77.6	201.7
VI.....	4.5	34.3	9.8	8	C.	S	2.3	94.3	229.9
VII.....	4.2	61.6	28.7	24	C.	SSE	2.0	105.3	217.8
VIII.....	3.0	34.7	21.6	11	C.	SSE	2.5	127.1	260.6
IX.....	6.6	19.1	9.0	12	C.	SSE	2.4	95.4	212.7
X.....	7.3	73.0	11.7	12	SSE	C	3.5	89.3	127.2
XI.....	7.4	62.6	14.4	3	SSE	C	3.8	78.5	148.0
XII.....	8.1	172.3	41.7	30	SSE	C	3.4	68.7	144.0
YEAR.....	5.6	886.7	41.7	30/12	C.	SSE	2.4	1094.5	2464.7

(l) — Metres per second.

## TERRITORIAL DIVISION

**B**RAZIL is divided into twenty States, the Territory of Acre and the Federal District, where the Capital of the Republic has its seat. Said twenty two units are distributed as follows, in accordance with the five great geographical zones of the country: North — Territory of Acre, States of Amazonas, Pará, Maranhão and Piauí; North-East — States of Ceará, Rio Grande do Norte, Paraíba, Pernambuco and Alagoas; East — States of Sergipe, Bahia and Espírito Santo; South — Federal District, States of São Paulo, Paraná,

Santa Catarina and Rio Grande do Sul; Central — States of Mato Grosso, Goiás and Minas Gerais.

The Brazilian States and the Territory of Acre are administratively divided into 1,478 Municipalities. The Federal District constitutes a sole Municipality and will be administered by the Union as long as it continues to be the seat of the Government of the Republic.

In Brazil the Municipal Regime was introduced by the Dutch statesman Maurice of Nassau with the creation of the Municipal Chamber denominated "Camara de Escabinos", whose members were chosen by the good men of the land. In each Municipality one of the members of said Municipal Corporation bearing the title of "Esculteto", administered the services and directed the Police of the "Município" (Municipality). This original system, modified and developed, prevailed until 1889; the local administrative chief being called the President of the "Camara" (Chamber) instead of "Esculteto".

After countless cuts and additions which preceded its autonomy, not only in Colonial times but also during the Empire, the "Município", through the inspiration of the Federal school, was finally established by the Republican Constitution of February 24, 1891, Article 68 of which was left untouched by the 1925-1926 reform: "The States shall be organized in a way that will ensure the autonomy of the "Municípios" (Municipalities) in everything relating to their respective interests".

In the Constitution of July 16, 1934, the principle of the autonomy of the "Municípios" (Municipalities) was maintained.

The Constitution of November, 10, 1937, maintained an identical policy, as one sees by Article 26 of same, which says: "The Municipalities shall be organized in a manner to assure to same, autonomy in everything relating to their respective interests".

For the administration of justice, most of the States of Brazil are divided into judicial circumscriptions bearing the generic denominations of "Comarcas" (Counties) "Terms" and "Distritos de Paz" (Judicial Districts). This divisional plan, which was in force throughout the country during the Colonial Period and Monarchic régime, emanated from the Portuguese Capital, the legislation of which extended, in those days, to Portugal's overseas Colonies. The first Republican Constitution to authorize the Federal States to organize their own justice, abolished the equality of the judiciary division, not only because of its constitutive elements, but also because of its titles.

Decree-Law N. 311 of March 2, 1938, laid down rules for the territorial division of the country and took other steps tending to unify, and rationalize the old system, by the suppression of all the anomalies which were creating difficulties in the administrative and judiciary affairs of the Nation, besides determining, in the third paragraph of Article sixteen, that after entering into force the new definition of the territorial picture, same can only be altered by quinquennial laws, promulgated in the last year of each period, so as to become effective on January of the following year.

The new administrative and judicial territorial division of the country, scheduled to enter into force on January 1, 1939, possesses amongst others the following fundamental characteristics:

I — There are four principal categories of circumscriptions: a) — exclusively judicial — "Comarcas" (Counties) and "Termos" (sub-divisions of "Comar-

cas"); b) — exclusively administrative — "Municípios" (Municipalities); c) — simultaneously judicial and administrative, — "Distritos" (Districts).

II — There are two subsidiary categories: a) — simultaneously judicial and administrative, — "Zonas" (Zones); b) — exclusively administrative, *i. e.*, Municipal Administration — "Sub-Distritos" (Sub-Districts).

III — A circumscription of any category whatsoever, is composed of one or more units pertaining to the category immediately inferior to same, forming a continuous area, there being hereby suppressed (*i. e.* by the provisions of above mentioned Decree-Law), in a radical manner, the cases of divided circumscriptions and those having territory enclosed in neighbouring circumscriptions (denominated in International Law: enclaved territory).

"Cidades" (Cities or Towns, as the case may be), shall continue to be Municipal seats. "Vilas" (Country Towns) are the "Sédes Distritais" (District seats) which are not "Sédes Municipais" (Municipal seats).

GENERAL TABLE OF THE POLITICAL, JUDICIAL AND ADMINISTRATIVE  
DIVISION OF BRAZIL IN 1936

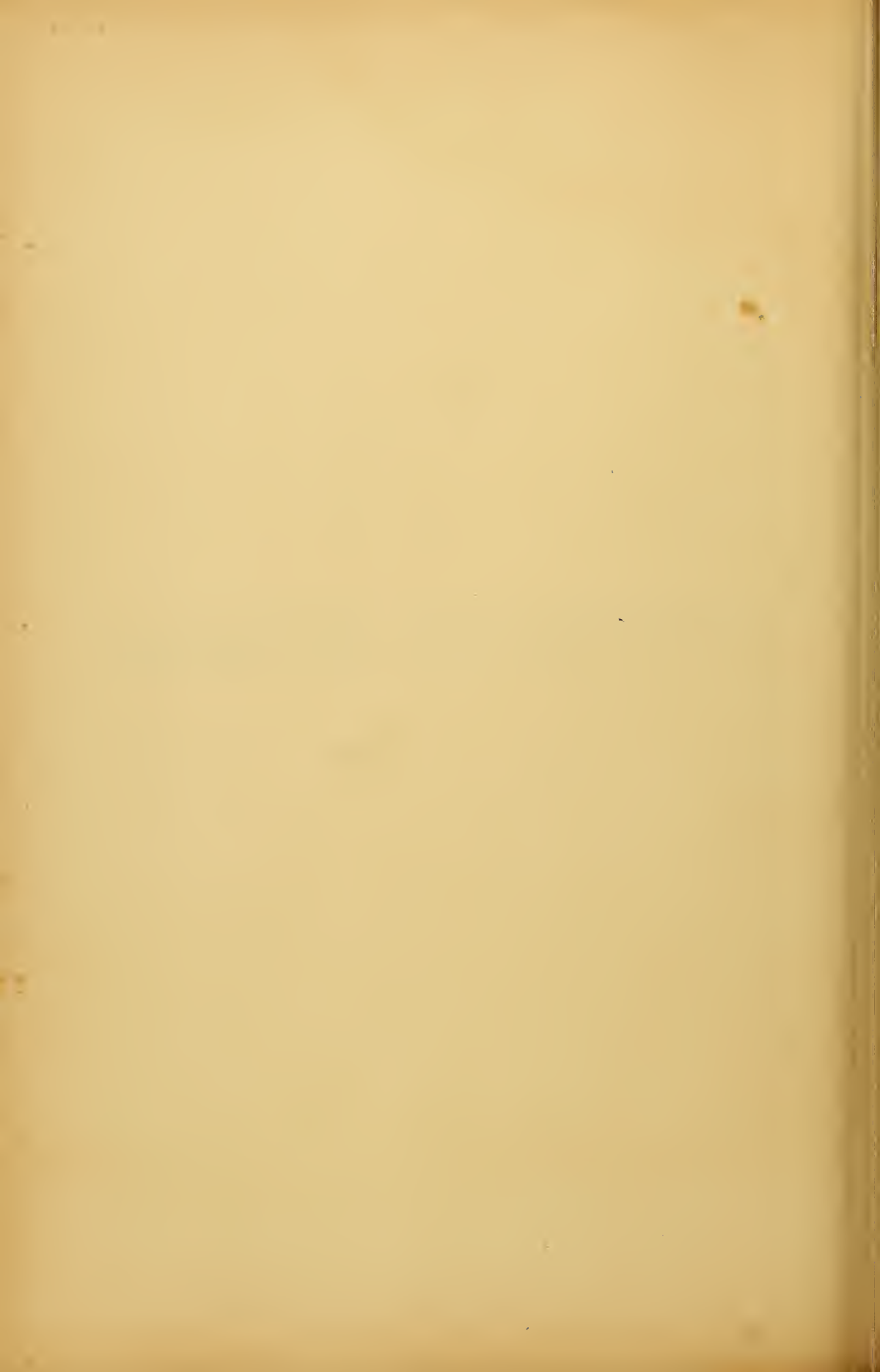
POLITICAL DIVISION (FEDERATED UNITS)	JUDICIAL DIVISION										ADMINISTRATIVE DIVISION			
	"COMARCAS" (COUNTIES)								"Ter- mos" (sub- divi- sions of "Co- marcas")	Judi- cial Distri- cts	MUNICIPALITIES			Admi- nistrative Dis- tricts
	Classified by advancement						Un- classi- fied	Total			With seat in		Total	
	1st	2nd	3rd	4th	5th	Spe- cial					Cities or towns	Coun- try towns		
Territory of Acre.....	—	—	—	—	—	5	—	5	11	72	5	—	5	5
Amazonas.....	12	6	—	—	—	—	—	18	28	32	13	15	28	28
Pará.....	26	1	—	—	—	—	—	27	48	240	39	11	50	50
Maranhão.....	21	3	—	—	—	—	—	24	65	89	27	38	65	65
Piauí.....	16	4	—	—	—	—	—	20	44	48	19	25	44	48
Ceará.....	16	7	1	—	—	—	—	24	66	368	42	35	77	384
Rio Grande do Norte.....	16	4	1	—	—	—	—	21	21	42	31	11	42	45
Paraíba.....	—	—	—	—	—	21	—	21	39	140	19	20	39	40
Pernambuco.....	18	32	2	—	—	—	—	52	84	280	84	—	84	280
Alagoas.....	18	2	—	—	—	—	—	20	36	77	28	8	36	42
Sergipe.....	—	—	—	—	—	12	—	12	38	52	20	21	41	41
Baía.....	20	16	12	1	—	—	—	49	134	572	73	78	151	572
Espírito Santo.....	15	4	1	—	—	—	—	20	20	130	21	11	32	130
Rio de Janeiro.....	19	15	7	—	—	—	1	42	49	246	49	—	49	246
Federal District.....	—	—	—	—	—	—	1	1	8	21	1	—	1	35
São Paulo.....	44	45	27	8	1	1	—	121	121	616	253	—	253	253
Paraná.....	—	—	—	—	—	29	—	29	40	151	30	26	56	56
Santa Catarina.....	9	10	9	4	—	—	—	32	32	202	13	25	43	200
Rio Grande do Sul.....	26	12	8	1	—	—	—	47	86	502	30	56	80	502
Mato Grosso.....	7	10	5	—	—	—	—	22	26	107	24	2	26	26
Goiás.....	4	18	5	—	—	—	—	27	55	163	33	22	55	163
Minas Gerais.....	68	57	17	2	—	—	—	144	180	883	185	30	215	877
BRAZIL.....	355	246	95	11	1	68	2	778	1,231	5,033	1,044	434	1,478	4,088





# *DEMOGRAPHIC SITUATION*







## INTRODUCTORY

THE peopling problem is truly one of the utmost importance to Brazil. The extension of our territory is very large in comparison to the number of inhabitants distributed therein, therefore the density of our population is indeed very scant. According to the census of 1920 a population of 30,635,605 was recorded. The three previous censuses registered the following: — 1872 — 10,112,061 inhabitants; 1890 — 14,333,915 and 1900 — 17,318,556.

By comparing these figures we arrive at the following increases: 1872 to 1890 — 4,221,854; thence to 1900 — 2,984,641; thence to 1920 — 13,317,049 increase.

One may, therefore, see how appreciable and progressive has been the increase of the population of Brazil. Nevertheless one cannot deny that such indices are insignificant when compared to the vastness of our area.

The census of 1930 was not carried out, although provided for. The estimates of our population, after 1920, show the following figures: 1921 — 31,457,887 inhabitants; 1923 — 32,734,665; 1925 — 34,063,243, 1927 — 35,445,753; 1929 — 36,884,375; 1931 — 38,381,385; 1933 — 39,939,154 and 1935 — 41,560,147.

According to the results of the 4 censuses taken our population was thus composed: In 1872 — 9,723,602 natives and 388,459 aliens; 1890 — 13,982,370 natives and 351,545 aliens; 1900 — 16,061,750 natives and 1,256,806 aliens and in 1920 — 29,045,227 natives and 1,590,378 aliens.

Above figures show that although Brazil is considered as an "immigration country", the growth of its population in the period mentioned is ascribable more to the Native stock than to the elements of Foreign colonization.

In fact, as was well stressed by the President of the Republic in a collective interview granted to the press of the country, "Brazil has lacked up to now a firm and consecutive demographic policy. The promotion of immigration, fixation of colonists and establishment of set rules for populating the country, were unheard subjects, even from a theoretical point of view. At the most, occasional immigration bursts were promoted in order to exploit certain sources of natural wealth, temporarily favoured by their increased prices in the markets consuming raw materials. Consequently the trend and utility of such a movement were nearly always very precarious. The reason for this was, *inter alia*, that the States had the right then to regulate the subject as they pleased".

Indeed, the lack of understanding and absence of method and guidance were responsible for the problem not having been taken into due consideration in its true aspects, even up to a short time back, so as to make possible the adoption of proper methods and plans for peopling the country and fixing both the National and Foreign colonist.

To-day, however, the work done by the Ministry of Labour with the objective of learning the density, location and demographic distribution of the various immigration groups, both Foreign and National, is considerable.

With the end in view of establishing ampler bases and a more complete regulation of the problem, the Government created the Immigration and Colonization Council, which is entrusted with the study of all questions and measures pertaining thereto, so as to assure the efficiency of the steps taken to increase the population of the country with local and foreign elements, as well as to control the work of entry and placing foreign immigrants in different parts of the country.

On the other hand, in order, to check the disorderly dislocation of the native labourer, which is occasioned by contingent and ephemeral reasons, often causing serious losses to the general economy, the creation of a special service is being contemplated, for the purpose of fomenting the peopling and organizing a rational exploitation of the fertile regions of the central and western parts of Brazil, by making use of the above mentioned elements.

Once this is done we shall have taken the first step towards our inland colonization, with evident advantage to the fixation of our workmen and to incorporate a large part of our territory in the national economic wealth.

It is worth while to point out also the work that is being carried on by the "Instituto Brasileiro de Geografia e Estatística" in order to gather the most comprehensive information and reliable results through the General Census of the Republic to be taken in the year 1940.

Whereas the initiative and responsibility of the general census of the country fall within the competence of the National Council of Statistics, its General Assembly decided to issue Resolution N. 50, of 3rd of July, 1937, now approved by the Government of the Union by Decree-law N. 237, of 2nd January, 1938, in which were established the bases for organizing, carrying out and disseminating or publishing the General Census to be taken.

To give an idea of the way that the work will be conducted for the census-taking, the rules of a more general character established by said resolution are stated below:

1st — All the nation-wide census work shall be accomplished, simultaneously, in a broad operation, taken on September 1st and which, on the same date, shall be repeated, decennially, in the years thousandth 0; 2nd — Each census-taking shall comprise: a) the Demographic Census; b) the Economical Census and all the complementary surveys into every social aspect. 3rd — The publication of the census results shall be made in two series of volumes — the national series and the regional series. The national series shall contain as many volumes as the number of censuses taken and each shall be unfolded into the necessary tomes, organized so as to contain in their tables solely, as regards every order of facts the national synthesis of the returns and its unfolding by the Federated Units in terms of immediate comparability. The regional, series shall have as many parts as are the Units of the Federation, each part containing a development similar to the national series, but presented with the possible enlargement or extensions conforming to the municipal and districtal division; 4th — Either the national series or each part of the regional series shall have an introductory volume containing specialized monographs on basic aspects of the municipal or regional life. These will be made possible with the collaboration of renowned specialists in each subject, in order to maintain and enlarge the work included in the publication of the census of 1920, which proved very successful; 5th — All the census results, properly speaking shall conform to the plans, instructions and rules that may be set up by the National Census Committee, with headquarters at the Capital of the Republic.



## POPULATION OF BRAZIL IN 1872, 1890, 1900 AND 1920

FEDERATED UNITS	Census taken on August 1, 1872	Census taken on December 31, 1890	Census taken on December 31, 1900	Census taken on September 1, 1920
Territory of Acre.....	—	—	—	92,379
Amazonas.....	57,610	147,915	249,756	363,166
Pará.....	275,237	328,455	445,356	933,507
Maranhão.....	860,640	430,854	499,308	874,337
Piauí.....	211,822	267,609	334,328	609,003
Ceará.....	721,686	805,687	849,127	1,319,228
Rio Grande do Norte.....	238,979	268,273	274,317	537,135
Paraíba.....	376,226	457,232	490,784	961,106
Pernambuco.....	841,539	1,030,224	1,178,150	2,154,835
Alagoas.....	348,009	511,440	649,273	978,748
Sergipe.....	234,643	310,926	356,264	477,064
Baía.....	1,379,616	1,919,802	2,117,056	3,334,465
Espírito Santo.....	82,137	135,997	209,783	457,328
Rio de Janeiro.....	819,604	876,884	926,035	1,559,371
Federal District.....	274,972	522,651	691,565	1,167,873
São Paulo.....	537,354	1,384,763	2,232,279	4,592,188
Paraná.....	126,722	249,491	327,136	685,711
Santa Catarina.....	159,802	233,769	320,289	668,743
Rio Grande do Sul.....	446,962	897,455	1,149,070	2,182,713
Mato Grosso.....	60,417	92,827	118,025	246,612
Goiás.....	160,395	227,572	255,284	511,919
Minas Gerais.....	2,102,689	3,184,099	3,594,471	5,888,174
<b>BRAZIL.....</b>	<b>10,112,061</b>	<b>14,333,915</b>	<b>17,318,556</b>	<b>30,635,605</b>

## POPULATION OF THE CAPITALS IN 1872, 1890, 1900 AND 1920

FEDERATED UNITS AND CAPITALS	Census taken on August 1, 1872	Census taken on December 31, 1890	Census taken on December 31, 1900	Census taken on September 1, 1920
Amazonas : Manáus.....	29,334	38,720	50,300	75,704
Pará : Belém.....	61,997	50,064	96,580	236,402
Maranhão : São Luis.....	31,604	29,308	36,798	52,929
Piauí : Teresina.....	21,692	31,523	45,816	57,500
Ceará : Fortaleza.....	42,458	40,902	43,869	78,536
Rio Grande do Norte : Natal.....	20,892	13,725	16,056	30,696
Paraíba : João Pessoa.....	24,714	18,645	28,793	52,990
Pernambuco : Recife.....	116,671	111,556	113,106	238,843
Alagoas : Maceió.....	27,703	31,498	36,427	74,166
Sergipe : Aracajú.....	9,559	16,336	21,132	37,440
Baía : Salvador.....	129,109	174,412	205,813	283,422
Espírito Santo : Vitória.....	16,157	16,887	11,850	21,866
Rio de Janeiro : Niterói.....	47,548	34,269	53,433	86,238
São Paulo : São Paulo.....	31,385	64,934	239,820	579,033
Paraná : Curitiba.....	12,651	24,553	49,755	78,986
Santa Catarina : Florianópolis.....	25,709	30,687	32,229	41,338
Rio Grande do Sul : Porto Alegre.....	43,908	52,421	73,674	179,263
Mato Grosso : Cuiabá.....	35,987	17,815	34,393	33,678
Goiás : Goiânia.....	19,159	17,181	13,475	21,22
Minas Gerais : Belo Horizonte.....	—	—	13,472	55,563

### ESTIMATE OF THE POPULATION OF BRAZIL

The data regarding the population of Brazil, given below is based on the revision made by the late Instituto Nacional de Estatística (National Institute of Statistics), now denominated the Instituto Brasileiro de Geografia e Estatística (Brazilian Institute of Geography and Statistics), on the estimates prepared by the Directorate of General Statistics, which, considering the figures obtained by the exclusive use of the rate of geometrical increase unsatisfactory, suggested to the Executive Board of said Institute the advisability of examining the subject with a view to finding a more rigorous solution. This revision was made owing to the fact that the rate of increase of the population according to recent studies on the matter, confirmed by the census taken in the State of São Paulo and the calculations made by the League of Nations, had declined in intensity, although still being very high. The demographic calculations with relation to the Capitals of the States, took into consideration not only the ratepayers census increase but the variations of the Municipal areas, and where possible, the data of the Civil Register.

#### ESTIMATES OF THE POPULATION OF THE FEDERATED UNITS FOR THE 1925-1938 PERIOD

FEDERATED UNITS	POPULATION CALCULATED ON DECEMBER 31							
	1925	1927	1929	1931	1933	1935	1937	1938
Territory of Acre....	99,976	102,942	105,972	109,067	112,226	115,451	118,742	120,412
Amazonas.....	388,468	398,227	408,132	418,179	428,366	438,691	449,152	454,433
Pará.....	1,137,185	1,201,333	1,269,365	1,341,520	1,418,048	1,499,213	1,585,295	1,630,273
Maranhão.....	967,866	1,005,239	1,043,917	1,083,939	1,125,342	1,168,167	1,212,452	1,235,157
Piauí.....	679,121	707,350	736,686	767,169	798,839	831,737	865,904	883,478
Ceará.....	1,428,382	1,471,023	1,514,598	1,559,114	1,604,576	1,650,991	1,698,360	1,722,405
Rio Grande do Norte	607,133	635,699	665,613	696,937	729,734	764,070	800,014	818,612
Paraíba.....	1,686,332	1,137,435	1,190,969	1,247,027	1,305,722	1,367,172	1,431,500	1,464,783
Pernambuco.....	2,404,758	2,505,449	2,610,138	2,718,967	2,832,081	2,949,634	3,071,777	3,134,620
Alagoas.....	1,053,871	1,083,050	1,112,774	1,143,042	1,173,852	1,205,204	1,237,093	1,253,240
Sergipe.....	502,691	512,424	522,214	532,058	541,951	551,887	561,861	566,861
Baía.....	3,619,195	3,730,706	3,844,820	3,961,563	4,080,961	4,203,033	4,327,801	4,391,204
Espírito Santo.....	527,318	556,447	587,282	619,956	654,544	691,169	729,951	760,190
Rio de Janeiro.....	1,713,692	1,774,903	1,837,922	1,902,999	1,969,969	2,038,943	2,109,984	2,146,257
Federal District.....	1,325,348	1,394,584	1,467,603	1,544,612	1,625,824	1,711,466	1,801,784	1,848,758
São Paulo.....	5,217,242	5,473,634	5,742,897	6,025,669	6,322,604	6,634,389	6,961,740	7,131,486
Paraná.....	785,071	826,142	869,469	915,161	963,352	1,014,177	1,067,779	1,095,664
Santa Catarina.....	765,081	804,875	846,829	891,061	937,695	986,855	1,038,678	1,065,632
Rio Grande do Sul.....	2,453,162	2,562,903	2,677,456	2,797,021	2,921,801	3,052,009	3,187,861	3,257,977
Mato Grosso.....	282,177	296,868	312,359	328,693	345,915	364,070	383,211	393,168
Goiás.....	581,227	609,639	639,466	670,777	703,646	738,146	774,354	793,125
Minas Gerais.....	6,437,947	6,654,881	6,877,814	7,106,854	7,342,106	7,583,673	7,831,658	7,958,090
<b>BRAZIL.....</b>	<b>34,063,243</b>	<b>35,445,763</b>	<b>36,884,375</b>	<b>38,381,385</b>	<b>39,939,154</b>	<b>41,560,147</b>	<b>43,246,931</b>	<b>44,115,825</b>

#### POPULATION ESTIMATES FOR THE CAPITALS OF THE FEDERATED UNITS OF BRAZIL

FEDERATED UNITS AND CAPITALS	POPULATION CALCULATED ON DECEMBER 31							
	1925	1927	1929	1931	1933	1935	1937	1938
Territory of Acre :								
Rio Branco.....	22,780	23,818	24,903	26,140	27,331	28,576	29,878	30,551
Amazonas :								
Manáus.....	80,194	81,946	83,736	85,566	87,436	89,346	91,298	92,290
Pará :								
Belém.....	260,137	269,640	279,490	306,080	282,708	293,036	303,740	309,238
Maranhão :								
São Luís.....	58,413	60,613	62,896	65,264	67,722	70,272	72,927	74,530



**POPULATION ESTIMATES FOR THE CAPITALS OF THE FEDERATED  
UNITS OF BRAZIL**

FEDERATED UNITS AND CAPITALS	POPULATION CALCULATED ON DECEMBER 31							
	1925	1927	1929	1931	1933	1935	1937	1938
<b>Piauí :</b>								
Teresina.....	53,755	55,073	56,423	57,806	59,223	60,674	62,161	62,918
<b>Ceará :</b>								
Fortaleza.....	112,549	117,995	123,707	129,827	136,386	143,277	150,516	154,272
<b>Rio Grande do Norte :</b>								
Natal.....	36,595	39,088	41,750	44,595	47,633	50,878	54,344	56,165
<b>Paraná :</b>								
João Pessoa.....	64,185	68,967	81,636	87,719	94,256	101,280	108,827	112,809
<b>Pernambuco :</b>								
Recife.....	292,513	315,616	376,625	406,087	438,159	472,764	510,102	529,863
<b>Alagoas :</b>								
Maceió.....	89,937	96,681	103,930	111,723	120,100	129,105	138,786	143,895
<b>Sergipe :</b>								
Aracaju.....	43,722	46,340	49,115	52,056	55,173	58,477	61,980	63,809
<b>Baía :</b>								
Salvador.....	309,113	319,336	329,898	340,809	352,081	363,726	375,756	381,919
<b>Espírito Santo :</b>								
Vitória.....	25,818	27,478	29,244	31,124	33,125	35,254	37,520	38,707
<b>Rio de Janeiro :</b>								
Niterói.....	98,192	103,090	108,232	113,630	119,297	125,247	131,495	134,735
<b>Federal District :</b>								
Rio de Janeiro.....	1,325,348	1,394,584	1,467,603	1,544,612	1,625,824	1,711,466	—	1,848,758
<b>São Paulo :</b>								
São Paulo.....	721,947	784,208	851,838	925,301	1,005,099	1,120,405	1,217,330	1,268,894
<b>Paraná :</b>								
Curitiba.....	90,554	95,172	100,135	105,357	110,851	116,632	122,715	125,874
<b>Santa Catarina :</b>								
Florianópolis.....	44,224	45,357	46,520	47,713	48,936	50,190	51,476	52,132
<b>Rio Grande do Sul :</b>								
Porto Alegre.....	228,148	224,008	245,209	268,416	293,820	321,628	352,068	368,352
<b>Mato Grosso :</b>								
Cuiabá.....	37,763	39,419	41,148	42,953	44,837	46,804	48,857	49,917
<b>Goiás :</b>								
Goiânia.....	24,005	25,140	46,328	27,573	28,876	30,241	22,000	28,500
<b>Minas Gerais :</b>								
Belo Horizonte.....	81,596	94,243	108,849	125,720	145,206	167,712	193,706	208,177

## IMMIGRATION AND EMIGRATION

**T**HE new Brazilian legislation on the entrance and permanence of Foreigners in National territory was given form in Decree-Law N. 406, of May 4, 1938 and in its Regulations, issued together with Decree N. 3,010, of August 20 of the same year. Said legislation determines a rigorous supervision of all Foreigners who wish to enter the country with the intention of permanently residing in same. The aim of aforesaid legislation is to preserve the ethnical constitution of Brazil, its political forms and its economic and cultural interests.

The general principals of above mentioned legislation are as follows:

Foreigners who wish to enter National territory are classified in two categories: permanent and temporary residents.

Those who intend to remain in the country for more than 6 months are considered to be permanent residents.

Temporary residents are classified as follows:

a) tourists, visitors in general, travellers in transit; scientists, professors, men of letters and lecturers;

b) representatives of commercial firms and those who come on a business trip;

c) artistes, sportsmen and members of similar professions.

The number of permanent residents of any nationality whatsoever, allowed to enter Brazil, was fixed in quotas that correspond to 2 % of the number of Foreigners of the same nationality who came to Brazil, in the same character, during the period which began on January 1, 1884 and terminated on December, 31, 1933, 80 % of said quota having to be agriculturists (*i. e.* farmers or farm labourers) and their respective families.

The granting of the necessary visé on Foreigners' passports shall, pursuant to certain and determined rules, be left to the criterion of the competent Consular Authority, whose increased autonomy, in this matter, simultaneously increases his responsibility.

Only Members of the Consular Career can grant aforesaid visé. Under no circumstances whatsoever can Honorary Consuls visé the passports of travellers who wish to come to Brazil.

The Union can make bilateral treaties for the purpose of settling agricultural workers from abroad in the country. Said treaties must stipulate the number and constitution of the draughts of immigrants and the supervision of the general conditions under which same travel, from the time they leave their own country until their definitive installation in Brazil. Moreover, aforesaid treaties must specify the concessions made, and the facilities reciprocally offered by the Signatory Governments.

Shipping companies and aerial transportation concerns cannot carry passengers to National ports and frontier stations without being previously registered in due form in the Immigration Department.

The entrance of Foreigners is only permitted:

a) by sea, through the ports of Belém (Pará), Recife (Pernambuco), Salvador (Baía), Rio de Janeiro, Santos, São Francisco do Sul or Florianópolis and Rio Grande.

b) by land, river or air, at the places where there are Federal Inspectorates of Immigration, or Immigration Department stations.

For the inspection of the vessel's papers and supervision of the disembarkation of passengers, the visit on board is made conjointly by the Port Immigration, Health, Police and Custom House Officers, and no Foreigner can disembark without the visé of the Police and Immigration Authorities in service on board.

No Foreigner, of more than 18 and less than 60 years of age, who enters the country in a permanent character, will be allowed to disembark before being identified and the passengers whose disembarking is impeded, or who are permitted to disembark pursuant to certain stipulated conditions, will also be identified.

Entrance into the country is prohibited for every Foreigner considered to be an undesirable or who has not complied with legal requirements.

Within the term of thirty days, counting from the date of disembarkment, Foreigners must present themselves to the "Serviço de Registro de Estrangeiros" (Foreigners' Registration Service), on which falls the duty of supervising them while they are in National territory.

During the term of four years, counting from the date of entrance into the country, Foreigners are obliged to annually revalidate their registration, it also being necessary to effect a new registration in case of change of employment, position or residence.

The distribution and localization of Foreigners are duties of the "Diretoria de Terras e Colonização" (Directorate of Land and Colonization), which aims



at harmonizing individual interests with those of the country, as regards concentration and assimilation, in accordance with the ethnical and social composition of the Brazilian People.

No nucleus, centre or colony (settlement) can have more than 25 % of immigrants of each nationality, nor less than 30 % of Brazilians, lacking which, said minimum can be made up, for preference, of Portuguese.

The legislation in force stipulates severe penalties for all kinds of fraud.

The Council of Immigration and Colonization superintends and directs the services relating to colonization, entrance, settling and distribution of Foreigners, its resolutions having executive force throughout the territory of the Republic.

#### ANNUAL QUOTAS FOR THE ENTRY OF IMMIGRANTS INTO BRASIL

NATIONALITY	TOTALS 1884-1933	QUOTA 2 %	FARMERS 80 %	SUNDRY 20 %
Albanian.....	10	0.20	0.1600	0.0400
American.....	10,716	214.32	171.4560	42.8640
Argentinian.....	17,437	348.74	278.9920	69.7480
Belgian.....	5,679	113.58	90.8840	22.7160
Bolivian.....	562	11.24	8.9920	2.2480
Bulgarian.....	273	5.46	4.3680	1.0920
Chilean.....	1,541	30.82	24.6560	6.1640
Chinese.....	1,581	31.62	25.2960	6.3240
Colombian.....	116	2.32	1.8560	0.4640
Costa Rican.....	28	0.56	0.4480	0.1120
Cuban.....	144	2.88	2.3040	0.5760
Czecho-Slovakian.....	7,037	140.74	112.5920	28.1480
Danish.....	2,809	56.18	44.9440	11.2360
Danziger.....	227	4.54	3.6320	0.9080
Dominican.....	2	0.04	0.0320	0.0080
Dutch.....	7,479	149.58	119.6640	29.9160
Ecuadorian.....	56	1.12	0.8960	0.2240
Egyptian.....	618	12.36	9.8880	2.4720
English.....	21,172	423.44	338.7520	84.6880
Estonian.....	4,218	84.36	67.4880	16.8720
Finnish.....	533	10.66	8.5280	2.1320
French.....	54,006	1,080.12	864.0960	216.0240
German.....	238,602	4,772.04	3,817.6320	954.4080
Greek.....	4,011	80.22	64.1760	16.0440
Guatemalan.....	17	0.34	0.2720	0.0680
Haitian.....	6	0.12	0.0960	0.0240
Hungarian.....	16,243	324.86	259.8880	64.9720
Irakian.....	11	0.22	0.1760	0.0440
Iranian.....	119	2.38	1.9040	0.4760
Italian.....	1,401,335	28,026.70	22,421.3600	5,605.3400
Japanese.....	142,457	2,849.14	2,279.3120	569.8280
Jugoslavic.....	36,106	722.12	577.6960	144.4240
Lettish.....	3,331	66.62	53.2960	13.3240
Lithuanian.....	44,803	896.06	716.8480	179.2120
Luxemburger.....	157	3.14	2.5120	0.6280
Mexican.....	488	9.76	7.8080	1.9520
Nicaraguan.....	6	0.12	0.0960	0.0240
Norwegian.....	576	11.52	9.2160	2.3040
Panamanian.....	11	0.22	0.1760	0.0440
Paraguayan.....	732	14.64	11.7120	2.9280
Peruvian.....	1,135	22.70	18.1600	4.5400
Polish.....	61,520	1,230.40	984.3200	246.0800
Portuguese (1).....	1,147,737	22,954.74	18,363.7920	4,590.9480
Roumanian.....	38,048	760.96	608.7680	152.1920
Sansalvadorian.....	8	0.16	0.1280	0.0320
Spanish.....	577,264	11,545.28	9,236.2240	2,309.0560
Swedish.....	4,816	96.32	77.0560	19.2640
Swiss.....	9,020	180.40	144.3200	36.0800
Turkish.....	78,184	1,563.68	1,250.9440	312.7360
Uruguayan.....	7,681	153.62	122.8960	30.7240
Venezuelan.....	347	6.94	5.5520	1.3880
TOTALS.....	3,951,015	79,020.30	63,216.2400	15,804.0600

(1) — The Council of Immigration and Colonization, by a Resolution issued on April 22, 1939, and afterwards sanctioned by the President of the Republic, resolved to consider Portuguese citizens to be exempt from any numerical restriction whatsoever, as regards their entrance in National territory. Among the considerations on which said Resolution is based figures the reference to the "identicalness of religion, language and customs, as well as to racial and historical affinities, existing between Brazilians and Portuguese"

## IMMIGRATION

General incoming movement of passengers, according to sex and age in 1937

NATIONALITY	PASSENGERS ARRIVED IN BRAZIL						
	Total	ACCORDING TO SEX		ACCORDING TO AGE			
		Men	Women	Up to 3 years of age	From 3 to 7 years of age	From 7 to 12 years to age	Above 12 years of age
American.....	558	316	242	—	—	—	558
Argentinian.....	138	53	85	5	16	37	80
Austrian.....	493	285	208	1	3	8	481
Belgian.....	91	46	45	—	5	2	84
Bolivian.....	39	26	13	—	—	—	39
Bulgarian.....	3	1	2	—	—	—	3
Canadian.....	44	23	21	—	—	—	44
Chilean.....	165	90	75	—	—	—	165
Chinese.....	28	21	7	—	—	—	28
Colombian.....	16	12	4	—	—	—	16
Costa Rican.....	5	4	1	—	—	—	5
Cuban.....	30	22	8	—	—	—	30
Czecho-Slovakian.....	187	135	52	1	3	1	182
Danish.....	90	61	29	—	—	—	90
Danziger.....	5	2	3	—	—	—	5
Dominican.....	4	2	2	—	—	—	4
Dutch.....	244	186	58	—	—	—	244
Ecuadorian.....	18	8	10	—	—	—	18
Egyptian.....	11	8	3	—	—	—	11
English.....	1,835	1,072	763	—	—	—	1,835
Estonian.....	31	11	20	—	—	—	31
Finish.....	17	10	7	—	—	—	17
French.....	1,029	625	404	11	11	97	910
German.....	4,642	2,655	1,987	78	104	156	4,304
Greek.....	25	20	5	—	—	—	25
Guatemalan.....	2	1	1	—	—	—	2
Hungarian.....	154	88	66	—	—	—	154
Italian.....	2,946	1,817	1,129	43	65	103	2,735
Japanese.....	4,557	2,532	2,025	409	474	423	3,251
Jugoslavic.....	63	36	27	1	—	2	60
Lettish.....	22	9	13	—	—	—	22
Libanese.....	348	206	142	—	1	1	346
Lietchteinsteinian.....	1	1	—	—	—	—	1
Lithuanian.....	73	31	42	—	—	—	73
Luxemburger.....	41	24	17	—	—	3	38
Mexican.....	40	25	15	—	—	—	40
Moroccan.....	4	3	1	—	—	—	4
Nicaraguan.....	1	1	—	—	—	—	1
Norwegian.....	16	16	—	—	—	—	16
Palestinian.....	15	11	4	—	—	—	15
Panamanian.....	6	4	2	—	—	—	6
Paraguayan.....	136	109	27	—	—	—	136
Persian.....	1	1	—	—	—	—	1
Peruvian.....	114	87	27	—	2	—	112
Polish.....	2,540	1,363	1,187	1	26	80	2,433
Portuguese.....	11,417	7,182	4,235	408	547	809	9,653
Roumanian.....	229	125	104	—	7	3	219
Russian.....	52	36	16	—	—	—	52
Sansalvadorian.....	8	5	3	—	—	—	8
Spanish.....	1,150	779	371	3	—	8	1,139
Syrian.....	109	79	30	—	—	—	109
Swedish.....	55	42	13	—	—	—	55
Swiss.....	473	348	125	15	22	51	385
Turkish.....	47	32	15	—	—	—	47
Uruguayan.....	250	185	65	—	—	—	250
Venezuelan.....	59	38	21	—	—	—	59
TOTALS.....	34,677	20,900	13,777	976	1,286	1,784	30,631

## IMMIGRATION

General incoming movement of passengers, by nationalities, families and professions in 1937

NATIONALITY	PASSENGERS ARRIVED IN BRAZIL									
	Total	ACCORDING TO PROFESSIONS								
		Farmers and farm labourers			Rural workers			Various professions		
		Families		Indivi- duals	Families		Indivi- duals	Families		Indivi- duals
		Number	Members		Number	Members		Number	Members	
American.....	558	—	—	—	—	—	—	134	457	101
Argentinian.....	138	—	—	—	—	—	—	22	129	9
Austrian.....	493	14	51	29	—	—	1	42	145	287
Belgian.....	91	—	—	—	—	—	—	14	34	57
Bolivian.....	39	—	—	—	—	—	—	7	23	16
Bulgarian.....	3	—	—	—	—	—	—	—	—	3
Canadian.....	44	—	—	1	—	—	—	10	25	18
Chilean.....	165	—	—	—	—	—	—	22	69	96
Chinese.....	28	—	—	—	—	—	—	3	7	21
Colombian.....	16	—	—	—	—	—	—	3	6	10
Costa Rican.....	5	—	—	—	—	—	—	1	2	3
Cuban.....	30	—	—	—	—	—	—	2	7	23
Czecho-Slovakian.....	187	5	17	3	—	—	—	7	22	145
Danish.....	90	—	—	—	—	—	—	16	41	49
Danziger.....	5	—	—	—	—	—	—	1	2	3
Dominican.....	4	—	—	—	—	—	—	1	3	1
Dutch.....	244	1	3	1	—	—	—	24	65	175
Ecuadorian.....	13	—	—	—	—	—	—	3	14	4
Egyptian.....	11	—	—	—	—	—	—	3	7	4
English.....	1,835	2	4	2	—	—	—	385	941	888
Estonian.....	31	—	—	—	—	—	—	2	5	26
Finish.....	17	—	—	—	—	—	—	2	7	10
French.....	1,029	—	—	—	—	—	—	144	370	659
German.....	4,642	40	143	50	—	—	—	628	2,715	1,734
Greek.....	25	—	—	—	—	—	—	—	—	25
Guatemalan.....	2	—	—	—	—	—	—	1	2	—
Hungarian.....	154	—	—	1	—	—	—	23	59	94
Italian.....	2,946	14	46	42	2	11	5	333	881	1,961
Japanese.....	4,557	891	3,859	612	—	—	—	9	26	60
Jugoslavic.....	63	6	16	4	—	—	—	4	11	32
Lettish.....	22	—	—	1	—	—	—	3	8	13
Libanese.....	348	2	7	7	—	—	—	36	116	218
Liechtensteinian.....	1	—	—	—	—	—	—	—	—	1
Lithuanian.....	73	1	3	10	—	—	—	5	10	50
Luxemburger.....	41	—	—	—	—	—	—	10	27	14
Mexican.....	40	—	—	—	—	—	—	6	19	21
Moroccan.....	4	—	—	—	—	—	—	1	2	2
Nicaraguan.....	1	—	—	—	—	—	—	—	—	1
Norwegian.....	16	—	—	—	—	—	—	—	—	16
Palestinian.....	15	—	—	—	—	—	—	3	9	6
Panamanian.....	6	—	—	—	—	—	—	2	4	2
Paraguayan.....	136	—	—	—	—	—	—	8	21	115
Persian.....	1	—	—	—	—	—	—	—	—	1
Peruvian.....	114	—	—	—	—	—	—	12	27	87
Polish.....	2,540	426	1,757	121	1	5	1	96	267	359
Portuguese.....	11,417	71	246	295	4	12	10	1,525	4,681	6,173
Roumanian.....	229	5	32	5	—	—	—	26	76	116
Russian.....	52	—	—	—	—	—	—	3	8	44
Sansalvadorian.....	8	—	—	—	—	—	—	1	3	5
Spanish.....	1,150	7	25	3	5	35	3	106	307	777
Syrian.....	109	1	2	1	—	—	—	9	24	82
Swedish.....	55	—	—	—	—	—	—	5	10	45
Swiss.....	473	39	203	18	—	—	—	54	243	9
Turkish.....	47	—	—	—	—	—	—	5	18	29
Uruguayan.....	250	—	—	—	—	—	—	104	230	20
Venezuelan.....	59	—	—	—	—	—	—	11	26	33
TOTALS.....	34,677	1,525	6,414	1,206	12	63	20	3,877	12,211	14,763



## EMIGRATION

General outgoing movement of passengers, according to sex and age in 1937

NATIONALITY	PASSENGERS DEPARTED FROM BRAZIL						
	Total	ACCORDING TO SEX		ACCORDING TO AGE			
		Men	Women	Up to 3 years of age	From 3 to 7 years of age	From 7 to 12 years of age	Above 12 years of age
American.....	448	220	228	6	20	20	402
Argentinian.....	92	72	20	8	1	24	59
Armenian.....	1	1	—	—	—	—	1
Austrian.....	238	156	82	4	3	28	203
Belgian.....	64	35	29	1	1	—	62
Bolivian.....	13	6	7	1	1	—	11
Bulgarian.....	10	7	3	1	—	—	9
Canadian.....	11	8	3	1	—	—	10
Chilean.....	82	54	28	1	4	1	76
Chinese.....	29	25	4	—	1	2	26
Colombian.....	3	2	1	—	—	—	3
Costa Rican.....	1	1	—	—	—	—	1
Cuban.....	17	12	5	—	—	—	17
Czecho-Slovakian.....	45	29	16	3	2	1	39
Danish.....	44	30	14	—	3	1	40
Danziger.....	3	2	1	—	—	—	3
Dutch.....	80	53	27	1	4	1	74
Ecuadorian.....	5	4	1	—	—	—	5
Egyptian.....	6	4	2	—	—	—	6
English.....	477	302	175	12	23	17	425
Estonian.....	13	5	8	—	—	1	12
Finish.....	19	12	7	—	1	3	15
French.....	389	225	164	1	7	7	374
German.....	3,480	1,983	1,497	116	181	217	2,966
Greek.....	46	42	4	—	—	—	46
Guatemalan.....	1	1	—	—	—	—	1
Haitian.....	1	1	—	—	—	—	1
Hungarian.....	90	42	48	—	1	—	89
Italian.....	2,303	1,490	813	38	68	83	2,114
Japanese.....	1,383	787	596	84	131	129	1,039
Jugoslavic.....	16	12	4	—	—	—	16
Lettish.....	18	9	9	—	—	—	18
Libanese.....	217	150	67	8	8	18	183
Lithuanian.....	69	52	17	3	—	—	66
Luxemburger.....	12	8	4	1	3	2	6
Mexican.....	11	9	2	—	—	—	11
Moroccan.....	1	—	1	—	—	—	1
Norwegian.....	12	10	2	—	—	—	12
Palestinian.....	31	23	8	1	2	3	25
Paraguayan.....	10	7	3	—	—	3	7
Persian.....	2	2	—	—	—	—	2
Peruvian.....	12	8	4	2	2	—	8
Polish.....	388	266	122	10	21	19	338
Portuguese.....	6,389	4,595	1,794	257	288	245	5,599
Roumanian.....	108	66	42	3	10	1	94
Russian.....	43	34	9	1	—	1	41
Sansalvadorian.....	2	—	2	—	—	—	2
Spanish.....	1,063	792	271	15	19	11	1,018
Syrians.....	104	92	12	3	4	3	94
Swedish.....	32	27	5	—	—	—	32
Swiss.....	87	55	32	1	5	1	80
Turkish.....	23	18	5	—	—	1	22
Uruguayan.....	36	24	12	—	4	6	26
Venezuelan.....	4	2	2	—	—	—	4
TOTALS.....	18,084	11,872	6,212	583	818	349	15,834

## EMIGRATION

General outgoing movement of passengers, by nationalities, families  
and professions in 1937

NATIONALITY	PASSENGERS DEPARTED FROM BRAZIL									
	Total	ACCORDING TO PROFESSIONS								
		Farmers and farm labourers			Rural workers			Various professions		
		Families		Indivi- duals	Families		Indivi- duals	Families		Indivi- duals
		Number	Members		Number	Members		Number	Members	
American.....	448	—	—	—	—	—	—	63	175	273
Argentinian.....	92	—	—	—	—	—	—	32	71	21
Armenian.....	1	—	—	—	—	—	—	—	—	1
Austrian.....	238	—	—	—	—	—	—	17	52	186
Belgian.....	64	—	—	—	—	—	—	7	16	48
Bolivian.....	13	—	—	—	—	—	—	2	5	8
Bulgarian.....	10	—	—	—	—	—	—	2	4	6
Canadian.....	11	—	—	—	—	—	—	1	3	8
Chilean.....	82	—	—	—	—	—	—	10	27	55
Chinese.....	29	—	—	—	—	—	—	2	8	21
Colombian.....	3	—	—	—	—	—	—	1	2	1
Costa Rican.....	1	—	—	—	—	—	—	—	—	1
Cuban.....	17	—	—	—	—	—	—	2	14	3
Czecho-Slovakian.....	45	—	—	—	—	—	—	8	20	25
Danish.....	44	—	—	—	—	—	—	5	16	28
Danziger.....	3	—	—	—	—	—	—	—	—	3
Dutch.....	80	—	—	—	—	—	—	10	26	54
Ecuadorian.....	5	—	—	—	—	—	—	—	—	5
Egyptian.....	6	—	—	—	—	—	—	2	4	2
English.....	477	—	—	—	—	—	—	65	180	297
Estonian.....	13	—	—	—	—	—	—	2	5	8
Finish.....	19	—	—	—	—	—	—	1	4	15
French.....	389	—	—	—	—	—	—	30	73	316
German.....	3,480	—	—	—	—	—	—	563	1,590	1,890
Greek.....	46	—	—	—	—	—	—	1	2	44
Guatemalan.....	1	—	—	—	—	—	—	—	—	1
Haitian.....	1	—	—	—	—	—	—	—	—	1
Hungarian.....	90	—	—	—	—	—	—	9	23	67
Italian.....	2,303	—	—	—	—	—	—	256	752	1,551
Japanese.....	1,383	—	—	—	—	—	—	258	925	458
Jugoslavic.....	16	—	—	—	—	—	—	—	—	16
Lettish.....	18	—	—	—	—	—	—	3	9	9
Libanese.....	217	—	—	—	—	—	—	29	94	123
Lithuanian.....	69	—	—	—	—	—	—	4	8	61
Luxemburger.....	12	—	—	—	—	—	—	3	11	1
Mexican.....	11	—	—	—	—	—	—	—	—	11
Moroccan.....	1	—	—	—	—	—	—	—	—	1
Norwegian.....	12	—	—	—	—	—	—	1	2	10
Palestinian.....	31	—	—	—	—	—	—	4	13	18
Paraguayan.....	10	—	—	—	—	—	—	3	8	2
Persian.....	2	—	—	—	—	—	—	—	—	2
Peruvian.....	12	—	—	—	—	—	—	4	10	2
Polish.....	388	—	—	—	—	—	—	35	114	274
Portuguese.....	6,389	—	—	—	—	—	—	640	2,190	4,199
Roumanian.....	108	—	—	—	—	—	—	17	49	59
Russian.....	43	—	—	—	—	—	—	3	9	34
Sansalvadorian.....	2	—	—	—	—	—	—	—	—	2
Spanish.....	1,063	—	—	—	—	—	—	72	216	847
Syrian.....	104	—	—	—	—	—	—	5	22	82
Swedish.....	32	—	—	—	—	—	—	3	6	26
Swiss.....	87	—	—	—	—	—	—	12	33	54
Turkish.....	23	—	—	—	—	—	—	3	10	13
Uruguayan.....	36	—	—	—	—	—	—	8	26	10
Venezuelan.....	4	—	—	—	—	—	—	—	—	4
TOTALS.....	18,084	—	—	—	—	—	—	2,198	6,827	11,257



# *EXTRACTIVE PRODUCTION*





# MINERAL PRODUCTS

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## INTRODUCTORY

**B**RAZILIAN soil and sub-soil offer incalculable possibilities as regards mineral wealth. At various places on National territory we have mineral beds of the highest economic importance, most of them not being exploited at all.

During a certain period of the old Colonial era, mining attained great development in Brazil, thanks, above all, to the facilities offered by the superabundance of natural wealth sources up to then entirely unexploited, the figures on the quantities of gold and diamonds sent to the Portuguese Court at Lisbon, being very high indeed.

Various circumstances, however, caused the interest in mining operations to gradually cease, owing principally to the preponderance that agricultural activities acquired on a very firm basis in Brazilian economic affairs.

Having in view our recognized possibilities, the figures on the exportation of National mineral kingdom products, are relatively insignificant. It is only fair, however, to call special attention to the interest with which the proper Authorities are, of late, doing their very best to follow a new policy in this matter, not only by developing mining operations, but by also simultaneously bringing into being a really great siderurgical industry with the most modern equipment.

## *FEDERAL CONTROLLING ORGANS*

The "Departamento Nacional de Produção Mineral" (National Department of Mineral Production) is entrusted with the task of studying matters relating to the mineral industry of the country, it being, besides this, its duty to have perfect knowledge of the geology of Brazilian territory and, moreover, of the utilization of surface and subterranean waters, for the purpose of producing electrical energy and for other uses.

Said Department is constituted with the following technical organs; 1) — Geological and Mineralogical Services; 2) — Mineral Production Development Service; 3) — Water Service; and 4) — Central Mineral Production Laboratory.

Until the creation of the "Comissão de Estudos das Minas de Carvão de Pedra do Brasil", (Coal Commission), on July 23, 1934, the geological and mineralogical studies were made through the Geological and Geographical Surveys of the States of São Paulo and Minas Gerais, by the Geological and Mineralogical Division of the National Museum, and through private enterprise of people specially interested in the exploitation of Mineral Codes. Such studies, besides their limited character, had not in reality the indispensable continuity, and we can even say that, following the extinction of the "Comissão Geologica do Imperio", (Geological Commission of the Empire) in 1875, the Federal Government contributed very little to the knowledge of the geology and mineralogy of Brazil, notwithstanding the great contribution that such studies might have brought to the scientific, industrial and economic development of the country.

With the creation of said "Coal Commission", the Republican phase of above mentioned studies began, and the activity of aforesaid Commission (1904-1906), resulted in a notable contribution to the knowledge of the geology of Southern Brazil (São Paulo, Paraná, Santa Catarina and Rio Grande do Sul), not only from a purely scientific point of view, but also from the economic one, and, in relation to this last aspect, there were founded sure bases for the use of National coal.

On the January 13, 1907, the activities of the "Coal Commission" having been brought to an end, the "Servico Geologico e Mineralogico do Brasil" (Geological and Mineralogical Service of Brazil) was created, as a permanent official division, whose aims and functions are indicated by its very name.

The activities of said service were distributed as follows: studies of the problem of the dry region of the North-East of the country, the Iron Ores of Minas Gerais and the Coal Measures of Southern Brazil.

In the first division, the aim to attain was the geological and topographical exploratory survey of the States of Ceará, Rio Grande do Norte, Piauí, Paraíba and Pernambuco, for the purpose of preparing a scientific basis for the utilization of underground and local waters, and the construction of dams; in the second division the topographical survey and the computation of the economic value of the iron ore deposits of the Serra do Espinhaço; in the third one the conclusion of the program of deep borings and geological studies in the States of Paraná and Santa Catarina.

In other regions, as, for example, in the States of Baía and Mato Grosso, geological studies were made, thus providing knowledge of big areas, where the geological constitution was only superficially and rather uncertainly known. Until 1916, the Geological Service paid special attention to the geological study of little known areas of the country, increasing old data, and preparing with collections of minerals, rocks and fossils, the basis of its important Museum. At that time, the Survey began to think about the intensive utilization of the mineral resources of the country, specially of those on which industrial development depends.

In this way, since the beginning, favours were granted to the companies that proposed to exploit and improve the coals of the South, and to ironworks founded for the purpose of making pig iron and steel, using National materials.

The creation of a great National iron industry, through favours granted by the Federal Government, was also the object of serious studies. This problem remains unsolved, but has evolved in the sense of separating iron industries from the exportation of the ore.



The policy of granting favours to companies proposing to found or develop certain industries considered to be essential to industrial and economic development, was more closely followed after the Great War was finished.

Besides these industries, those of nitrates made from atmospherical nitrogen, (synthetic nitrate) cement and sub-products of coal were taken into consideration.

At that time the Belgo-Mineira, Gorceix, Magnavaca and other ironworks were constructed in the State of Minas Gerais; cement from Perú, in the State of São Paulo, was placed on the market. The exploration of the São Jeronymo and Butiá collieries, in the State of Rio Grande do Sul, was developed, identical measures being taken as regards the State of Santa Catarina.

Some of the companies did not make any progress, in spite of such favours, as, for instance, the "Siderurgica" of Ribeirão Preto.

In the Amazon Basin, geological studies of the principal affluents of the great river were made, extending along some of them as far as the frontiers of British Guiana, Venezuela, Colombia and Peru.

The economic objective of these studies, was the knowledge of the lignite possibilities of the Alto Solimões and the prospecting for coal, afterwards extended to petroleum, for which purpose discovery borings were made in the Rio Tapajóz, where some indications of oil were found, together with small quantities of gas.

Borings for oil, without commercial results, were made in the States of Pará, Alagoas, Baía, São Paulo, Paraná and Santa Catarina, and the installation of linometric rules was effected, for the study of various rivers in those States.

The Geological Survey created a Physics Division for the study of radioactive minerals and spectrography, started the scientific and industrial study of mineral and thermal waters of the country and made analyses of all the minerals collected in the field work.

Besides this, a petrographical section was created and that is where the actual National petrographs came from.

All the activities of the Geological Service, up to July 31, 1933, when it was extinguished and substituted by the "Departamento Nacional de Produção Mineral" (National Department of Mineral Production), were detailed in official publications under the following headlines: "Relatorio Anual do Director", "Monografias", "Boletins", and "Avulsos", (Annual Report of the Director, Monographs, Bulletins and Separate Items)

Said publications form a series of more than a hundred volumes, the utility of which has been proved by the interest shown in same by the readers of geological science data.

On July 31, 1933, the "Serviço Geologico e Mineralogico do Brasil" (Geological and Mineralogical Service of Brazil) was extinguished and in its place there was created the "Departamento Nacional de Produção Mineral".

Amongst the publications of the G. M. S. we may mention the "Geological Atlas of Brazil", which was finished in 1934.

On the Mineral Production Development Service there falls the duty of investigating and divulging all matters relating to mining, and that of developing the rational use of our mineral ores.



Among the principal attributions of this organ there are those fixed by the Code of Mines, which regulates the exploitation of mineral ore beds in Brazil.

The Water Service was created in 1933, for the purpose of giving greater efficiency to the study and appraisal of our hydraulic resources, this work having started in 1920, in the old Geological and Mineralogical Service of Brazil, by determination of the then minister Simões Lopes.

It was constituted, at the beginning, by three technical divisions: "Hydraulic Power" "Irrigation" and "Concessions, Legislation and Supervision".

There was afterwards transferred to same the division of "Hydrometry" of the old Meteorological Institute, same being thereafter known as the Irrigation, Reforestation and Colonization Service, which was created about the middle of 1934, the present Minister of Agriculture having a project to incorporate same again in the Water Service, which is the rational thing to do.

By express provision of the Water Code, Decree N. 24.643, of July 10, 1934, the Division of Concessions, Legislation and Supervision was divided into two parts: Division of Concessions and Legislation and Division of Supervision.

So that the Water Service is now composed of four Divisions:

- 1 — Hydraulic Power;
- 2 — Pluviometry and Inundations;
- 3 — Concessions and Legislation; and
- 4 — Supervision.

Thus organized, the Service is fulfilling its attributions to study the regime of our water-ways; to study and appraise our resources in hydraulic power; to study the phenomenon of inundations, foresee and give previous warning of the occurrence of same, wherever there are important interests to be safeguarded; to study and propose laws governing the use of hydraulic power and the utilization of hydro-electric energy; to study, from the technical and economic viewpoints, requests for concessions for aforesaid purposes; to propose the respective decrees and contracts; to compile and keep in order detailed statistics on the utilization of hydraulic power and electrical energy in the country.

Up to 1933 the Service had 86 hydrometric stations, at which 245 discharge measurements had been taken. There are now 432 stations, and about 5,500 discharge measurements have been made.

The appraisal of the country's hydraulic potential has also not been neglected.

We have studied 244 waterfalls, representing a total of 4,566,000 H.P. and have made the appraisal of our whole hydraulic potential, based not only on the studies of the Service itself, but also on information from various sources, considered to be reliable, said appraisal giving the grand total of 19,519,000 H. P.

Aforesaid appraisals are based on dry season discharges, therefore not including water storage possibilities. Neither are there taken into account the possibilities of water-way deviation and valley transpositions, which can greatly increase the available potential.

Even so, the appraisalment given above places Brazil in the fourth place on the list of the countries richest in hydraulic power.

On the same appraisalment basis (dry season discharges), complete statistics, organized by the World Power Conference, give the following figures, superior to the appraisalment made for our country:

- Russia — 78,000,000 H. P.  
U. S. A. — 34,028,000 H. P.  
Canada — 25,800,000 H. P.

There are, however, on Brazilian territory, still many zones to be studied. As said regions become better known, they will certainly increase the appraisal figures of our hydraulic potential.

As regards the pluviometric studies part, the Service obtains data from 825 stations and publishes a monthly bulletin which contains besides a map with the distribution of deviations and isometric data relating to normal pluviometric value, tables and other printed matter giving the water level variations for different rivers.

Inundation warnings are given for the Paraíba, São Francisco, Jequitinhonha and Itajai-Assú basins.

According to the data supplied to the Service, its inundation warnings avoided damage appraised at 1,206:000\$000 (1,206 contos), 731:729\$000 (731 contos 729 milréis), 100:000\$000 (100 contos) and 212:000\$000 (212 contos), respectively in the 1930-31, 1933-34, 1935-36 and 1937-38 periods.

Daily warnings are given to the São Francisco River navigation companies regarding the state of the waters. Bulletins are published at Belém (Pará) and Manaus, giving to Amazon basin navigators information on the state of the waters of the principal tributaries of said basin.

The Central Mineral Production Laboratory, is in its turn, the organ entrusted with the task of studying Analytical and Technological Chemistry. It is fully equipped to make chemical, physical and physico-chemical studies of any mineral substance whatsoever, being composed of two Divisions: the Division of Analyses and the Division of Experiments. Its cabinets for analytical chemistry, gold testing, electro-chemistry, spectro-chemistry, combustibles, etc., are model ones and the most perfect in the country.

The Laboratory's files contain thousands of samples and constitutes a veritable treasury of valuable data on the mineral resources of Brazil.

## APATITE

**T**HE Ipanema Rock, in the State of São Paulo, contains a very large quantity of apatite, a phosphated ore. In view of the importance of super-phosphates for farming purposes, the Ministry of Agriculture decided to construct, in Ipanema, a large factory to produce same, making use of the available supplies of apatite. Very soon now our farmers will be able to acquire the phosphated fertilizers which are indispensable in the task of increasing the productiveness of the soil. The Ipanema plant will have an annual capacity for 10,000 tons of sulphuric acid.

## BAUXITE

**B**RASIL has very important beds of bauxite, an aluminium ore whose exploitation is still in the preliminary stage. The largest beds are those of the Poços de Caldas Plateau, which cover an area of more than three thousand hectares, containing many million tons of this valuable ore. At Morro do Cruzeiro, in the Municipality of Ouro Preto, State of Minas Gerais, there are also beds containing many million tons of said ore, which is being utilized by the Companhia Eletro-Química, a company installed in aforesaid Mu-



municipality, for the manufacture of sulphate of aluminium. Besides above mentioned bauxite beds, there are many others in Brazil, such as, for example those in the States of Pará, Maranhão and Espírito Santo, which only lack the capital necessary for exploitation, in order to produce highly compensating profit for the investors. The bauxite beds in Brazil whose existence is already known, besides representing many million tons of ore, have a very high aluminium content. Their proper exploitation will doubtless constitute, for the future, one of our greatest sources of wealth.

## CEMENT

**T**HE cement industry, notwithstanding the fact that it is one of the most recent to enter the field, appears amongst those which have developed with the greatest rapidity in Brazil. No other industry can be considered as more genuinely National, for all of its raw material is of Brazilian origin. Up to ten years ago we were still importing the whole of the cement necessary for our building operations. Nowadays almost all of the cement we use comes from domestic factories. Very soon now, the National article, which is of a very high quality indeed, will supply the totality of our needs and still leave a surplus for exportation. In 1926 we imported 396,322 tons of cement, while National production only reached 13,382 tons. At the present time we buy abroad 12 % of the quantity we used to import. The figures show the definitive victory of National cement, the progress made and demonstrate just how much we economize by not having to remit abroad, annually, thousands of contos of reis to pay for overseas purchases. We have five Portland Cement plants actively working, with a combined annual capacity of 720,000 tons. There is also, in São Paulo, a Possolamico cement factory. In the State of Minas Gerais, in the Municipality of Passos, there is being mounted a Portland cement factory with an annual production capacity of 45,000 tons.

### PRODUCTION OF CEMENT

Quantity and value during the 1930-1937 period

Basis: 1925-1937=100

YEARS	QUANTITY		VALUE	
	Tons	Indexes	Contos of réis	Indexes
1930.....	87,160	173	12,121	168
1931.....	167,115	331	28,490	395
1932.....	149,453	296	29,360	407
1933.....	225,690	447	41,453	575
1934.....	323,909	642	64,600	896
1935.....	366,261	726	75,328	1,045
1936.....	485,064	962	105,829	1,469
1937.....	571,462	1,133	125,342	1,739

## CHROME

**C**HROMITE beds of economic value are to be found in Brazil, in the Municipalities of Queimadas, Bomfim, Campo Formoso and Saude, in the State of Baía. On the rural property denominated Fazenda Casbulho, there are important beds, which contain, according to calculations based on prospecting work done, 280,000 tons of exposed ore. The content in chrome oxide varies between 34 % and 51 %. The beds at Pedras Pretas, near the Santa Luzia station, in the Municipality of Queimadas, according to the appraisal made, contain about 100,000 tons of ore. Chrome crystals furnish a great variety of green, yellow, orange and red pigments, in very firmly fixed colours, being, for this reason, used on a large scale in the composition of paints and enamels. Besides this, chrome crystals are used in tanneries and, moreover, chromite is utilized as refractory material by industrial furnaces. The multiplicity of uses to which said crystals have of late years been put, increases the demand for chrome, and, as a natural sequence, the value of the respective beds.

## COAL

**T**HE existence of National coal has been known for more than a century, but the beds remained untouched in the mines because the geologists were of the opinion that its inferior qualities did not permit the profitable exploitation of same. It was the great war which, impeding the importation of all the fuel we needed, obliged Brazil to have recourse to its forest reserves and to try to exploit its carboniferous basins. Studies made regarding National coal showed that said carboniferous basins cover a great extent of territory. They start at Itapetinga, in the State of São Paulo, on the banks of the Paraopeba River, crossing, with small gaps in the chain, the States of Paraná and Santa Catarina, going as far as the Negro River and Candiota bed ends, in the State of Rio Grande do Sul. Gonzaga de Campos appraised said beds at 5,000,000,000 tons. The principal mines now being worked or being prepared for due exploitation are those of São Jeronimo, Butiá and Jacaré, in the State of Rio Grande do Sul, and those of Crissiuma, Urussanga, Tubarão, Lauro Muller, in the State of Santa Catarina. Our mines produce almost 800,000 tons per annum, most of which comes from the São Jeronimo colliery, which is worked at a depth of 80 meters. Although our coal is not of the highest quality, on undergoing certain and determined improvement processes, it serves its purpose quite well. Japanese coal is no better than ours and Japan only uses National coal. However, during the research work in the State of Piauí, fossil flora of a kind which justifies great hopes of there being found coal of a superior Westphalian type, of a grade corresponding to that of the principal carboniferous beds in the world, has recently been identified.

In no way at all can we cease to import coal. However, we ought to greatly reduce the amount imported, by also using our own product. In order to make our coal industry grow, the Federal Government obliges industrial concerns to use 20 % of National coal.



# PRODUCTION OF COAL

Quantity and value during the 1930-1937 period

Basis: 1925-1929 = 100

YEARS	QUANTITY		VALUE	
	Tons	Indexes	Contos of réis	Indexes
1930.....	285,148	108	15,021	92
1931.....	493,760	138	26,165	160
1932.....	542,773	152	23,907	148
1933.....	646,075	181	29,147	178
1934.....	730,622	204	22,997	201
1935.....	840,088	235	40,474	247
1936.....	662,196	185	32,902	201
1937.....	760,588	213	39,733	242

# DIAMONDS

THE States of Minas Gerais, Baía, Goiaz, Paraná and Mato Grosso have a great wealth in diamonds. This precious stone is found in the rubble on the river beds and on mountain slopes; it is never, however, encountered in solid rock, as sometimes happens with the African diamond.

Minas Gerais is the State which has, in Brazil, the largest production of diamonds. Its stones come from the two great diamond districts of the State: the 1st one in the North, comprehending the valleys of the Jêquetinhonha and Arassuaí and all their tributaries; the 2nd one being in the Western zone and including the Abaeté, Patos, Coromandel, Monte Carmelo and Estrela do Sul beds.

In the history of diamonds Brazil stand out with very beautiful gems of worldwide fame: "Estrela do Sul" (Southern Star) found at Bagagem weighing 254.5 carats and, after lapidation at Amsterdam, 125.5 carats; "Estrela de Minas" (Star of Minas), also discovered at Bagagem (in 1910) weighing 175 carats; "Diamante de Dresde" (The Dresden Diamond), green in colour, found, like the previously named gems, at Bagagem, weighing 119.5 carats, and reduced to 76.5 carats after being lapidated. In 1938, also in the State of Minas Gerais, there was found a diamond which owing to its weight, is going to occupy 3rd place among the great gems of the world. It is called the Getúlio Vargas, is the largest Brazilian diamond and weighs 754.5 carats. At the Rio Mint it was officially appraised at 871:920\$000 (871 contos, 920 milréis).

It was bought by a Foreign trust and sent to Amsterdam. The lapidaries there appraised it at 500,000 dollars, *i. e.*, 9,000 contos of reis at the present rate of exchange.

It is true that South Africa produces more diamonds than Brazil, but ours are white or azure in tone and sparkle in a way not to be seen in the South African gems.

Besides the diamond, which is a precious stone, there is found in Brazil, principally in the State of Baía, the carbonado or black diamond, which is harder than the hyaline variety and is also of greater density.

The carbonado or lavrita diamond, *up to now only found in Brazil*, is used on a large scale for perforating instruments, in the lapidation of precious stones, in turnery as applied to big caliber ordnance, in the teeth of rock cutting stones, etc.

Diamond exports, in 1937, reached 125,048.35 carats. In the State of Minas Gerais alone, annual production is appraised at more than 15,000 contos of réis.

The production of this precious stone in Brazil is almost entirely due to the efforts of independent prospectors, locally known as "garimpeiros".

## DIATOM

**D**IATOM, a member of the genus *Diatoma*, constitutes silicious formations mainly found on the North-Eastern coast. It originates from the agglomeration of microscopic masses of unicellular Algae denominated *Diatomaceous*. Notwithstanding the fact that above mentioned marine plants are extremely small, the fossil deposits resulting from their agglomeration, attain, in various regions of the globe, a thickness worthy of note. Diatom is generally of a light colour, yellow or reddish. It is used to isolate heat, for filters, refractory material, manufacture of dynamite, as a stiffener for nitro-glycerine, etc. etc.

In the States of Ceará, Rio Grande do Norte and Pernambuco, there are large deposits of Diatom. An important bed at Recife (Pernambuco), is being actively exploited.

## GOLD

**T**HE need of encouraging the gold mining industry continues to be an object of special attention in Brazil.

The general aim of the work done is the determination of the economic value of the beds, including the study of the genetic process, whenever primary deposits are under consideration, in order to clear up certain aspects of the scientific problem and make possible the solution of technical problems relating to the industrial utilization of the precious metal.

Pursuant to the pre-established programme, in the central zone of the State of Minas Gerais the competent technical experts are proceeding with the systematized studies of the old gold mines in the Municipalities of Caeté, Santa Barbara, Ouro Preto and Mariana, and of the gold bearing alluvials of the Paraopeba, Piranga, das Velhas, Arassuaí, Jequitinhonha and Grande rivers.

When the above mentioned research work is finished, it will be possible to form a well based opinion regarding the economical value of the respective mines, beds and on the possibilities offered to private initiative by each gold bearing region.

At Lagôa Dourada, in the same State, where there are gneiss strata with quartz veins enriched in a secondary degree by decomposed matter, known ever

since the old Colonial days, prospecting work has been concluded at three borings which have made possible the appraisal of a reasonable sized cube of ore.

In the State of Goiás, at the town of Bomfim, where there are vestiges of great old workings, such as those of the Poço da Roca and Zequinha, preliminary studies were made at twelve borings with a manual apparatus, it being concluded that the distribution of gold is very irregular. The precious metal was mostly found in the outer part of the veins, impregnating the rocks for short distances. Down to a depth of 50 meters, gold is encountered loose and should be sought for in the proximity of amphibolite diabasoide. It offers no possibility of industrial exploitation.

The basins of the Gurupi and Maracassumé rivers, in the region bordering on the States of Pará and Maranhão, were also studied. The surveys made authorize experts to include the Gurupí region among the richest gold bearing ones, as it already has an annual production of more than 500 kilos. In said region there was verified the existence of 103 workings, in 2 zones, the first on the coast and the second one in the interior.

In the State of Baía a preliminary study was made of the Itapicurú river basin, especially from the North-East to the East of Santa Luzia, in the Municipality of Queimadas. The auriferous alluvials constitute terraces of from 50 to 300 meters wide, over which the Itapicurú river has wended it unhurried way. One can admit that along the richest stretches of the river bed there is a reserve of from 150 to 300 kilos of gold per kilometer.

Besides the Itapicurú river region, prospecting work was carried out in the Jacobina, Rio de Contas and São Francisco regions.

In the State of São Paulo technical assistance was rendered to the Araçaguama mine workings. Up to 1937 said mine had produced 54,627 grammes of gold.

The auriferous formations in the Municipalities of Campo Largo, Sorocaba, Pilar, Capão Bonito, Iguape, Xiririca, Iporanga, Apiaí e Itapeceira, were surveyed.

In the State of Paraná, the auriferous districts of Curitiba, Campo Largo, São José dos Pinhais, etc., were inspected.

Detailed studies were made in the mines of Timbutuva, Ferraria and Ribeirão do Ouro, magnetic surveys being made on the Curitiba and Rio Negro highways, the results obtained being communicated to the concerns interested in same.

In the State of Rio Grande do Sul systematized studies are being made of the Bloco de Butiá mines and of others in the auriferous region of the State. The Bloco de Butiá mine produces ore of low average content, but which, however, can offer a basis for its economic utilization.

The Cerro Rico, Cerrito, Lavoura or Cerro Alegre mines were also examined.

The discovery of ore of a sufficiently high gold content at a place called Saraiva, has created great interest in mining circles. It is a bed worthy of the closest observation.

Prospecting work was carried out at the headwaters of the Vacacaí, the Cerrito do Ouro district, Barcelos mine, and at the gold finds in Camaquan and Aguas Doces, data being collected for further investigations.



## PRODUCTION OF GOLD

Quantity and value during the 1930—1937 period

Basis: 1925—1929 = 100

YEARS	QUANTITY		VALUE	
	Tons	Indexes	Contos of réls	Indexes
1930.....	3,925	120	25,472	164
1931.....	3,174	97	36,496	235
1932.....	3,585	110	34,966	225
1933.....	3,660	112	40,244	259
1934.....	3,479	107	51,936	335
1935.....	3,687	113	67,980	438
1936.....	3,953	121	74,607	481
1937.....	4,535	136	80,617	519

## IRON

**B**RAZIL occupies first place at the present time as regards iron resources. Its colossal deposit can supply all the needs of the world for hundreds of years.

The data given below is taken from Kuhn's statistics on the world's iron reserves:

Brazil, 23 %; United States, 20 %; France, 16 %; Newfoundland, 11.3 %; Cuba, 9.7 %; Great Britain, 3.1 %; Germany, 2.8 %; Sweden, 2.3 %; Spain, 2.1 %; Russia, 1.9 %; Chile, 1.5 %; India, 1.2 %; China, 1.2 %.

Recent studies made by the General Statistics Service of the State of Minas Gerais calculate the beds in that State to contain 130 million tons of ore, which is much more than is given in Kuhn's statistics. With this increase, instead of 23 %, our deposits represent 34 % of the world's iron reserves. The Brazilian beds are not only the largest in the world, but are also the most valuable, as the quality of the ore is far superior to that of all the other beds in the world. The ore has a very small percentage of brimstone and of phosphorus and a very high metallic content. The ores exploited in other parts of the earth have from 30 % to 66 % of iron, while ours have from 66 % to 70 % and even as much as 72 %.

The States richest in iron ore are: Minas Gerais, São Paulo, Santa Catarina, Espírito Santo, Mato Grosso, Goiás and Rio Grande do Sul. The largest beds are distributed over five mountain ranges. One of these ranges, alone, contains more ore than all the beds in Europe. The first range, to the East, starts near Sacramento, in the Municipality of Santa Barbara, Parish of Prata, passes through São Domingos, crosses the Piracicaba until it reaches the Ribeirão de Cocais Grande. Length 72 kilometers. The second range begins near Piracicaba, follows the left bank of the river and forms the peak of the hill known as Morro Agudo. Length 60 kilometers. The third range starts at Capão, to the South of Ouro Preto, goes on towards Caraça, terminating at the gold workings of Commander-in-Chief Innocencio. It has a length of 70 kilometers. The fourth range makes its appearance at the Southern end of the Mãe dos Homens Range, near the village of Capanema and continues on its way to Gongo, Cocais and Itabira, where it forms the high peak of the town. The fifth range commences to the South of the peak of Itabira do Campo, which is formed entirely of oxy-



dized iron, crosses the river of the Velhas in Sabará, continuing until it terminates near Caeté. It has a length of 108 kilometers.

The principal ore of Brazil, the one that is most abundant and more widely scattered throughout the country, is oligisto or hematite, which is found together with sand, forming the rock called itabirito. Magnetite also constitutes large beds in various States, principally in Paraná, Santa Catarina and São Paulo. Its metallic content is 72 % of iron. It is the richest of all iron ores, but less abundant than oligisto, whose metallic content is 70 % and is also more difficult to smelt than the last named ore.

#### PRODUCTION OF PIG IRON

Quantity and value during the 1930-1937 period

Basis: 1925—1929=100

YEARS	QUANTITY		VALUE	
	Tons	Indexes	Contos of réle	Indexes
1930.....	35,305	140	8,745	137
1931.....	28,114	111	7,369	116
1932.....	38,809	114	6,483	102
1933.....	46,764	185	11,671	183
1934.....	58,559	232	14,493	228
1935.....	64,082	254	14,957	235
1936.....	78,418	311	23,564	370
1937.....	98,108	386	33,897	532

#### PRODUCTION OF SHEET IRON

Quantity and value during the 1930-1937 period

Basis: 1925—1929=100

YEARS	QUANTITY		VALUE	
	Tons	Indexes	Contos of réle	Indexes
1930.....	25,895	145	20,716	145
1931.....	18,892	106	15,114	106
1932.....	29,547	166	23,638	166
1933.....	42,362	238	33,890	238
1934.....	48,699	273	38,990	273
1935.....	52,358	294	39,347	276
1936.....	62,946	353	61,387	431
1937.....	71,419	401	73,977	519

## LEAD

THE silver plumbiferous sector of Brazil is mainly in the Paranapiacaba Range, in the South of the State of São Paulo. The Apiaí, Iporanga and Guapiara region is the most important one on our territory, as regards lead and silver veins. In this region the ore is richer, both in lead and silver, than the average production of New South Wales, where there is located the greatest lead metallurgical industry in the world. The galena, sulphuret of lead, is argentiferous and is sometimes found in the pyrite beds containing

gold. The analyses made by the Department of Mineral Production showed that aforesaid ore contains 84.35 % of lead and 473.6 grammes of silver per ton, besides traces of gold. At the place denominated Sitio dos Macacos, between Furnas and Iporanga, there are many veins having a much higher silver content: 2,400 to 6,000 grammes per ton of lead.

## MANGANESE

**M**ANGANESE is one of the metals that the world cannot do without. Steel metallurgy requires a large quantity of manganese. Minas Gerais, Mato Grosso, Baía and Goiaz are the wealthiest States in said ore.

The first named State possesses, in beds already known, about 12,000,000 tons of the highest metallic content, 40 % and 55 %, of a very pure quality. One of its mines, the Morro da Mina, at Queluz, was sold after the war, in 1920, to an American company for four million dollars. We are one of the nations in the world which possess the greatest quantity of manganese, but our beds, estimated at 250,000,000 tons, are not in accordance with our iron ore reserves. As manganese is a metal absolutely indispensable in the metallurgy of iron and steel, it is necessary for us to reduce our exports and develop the iron and steel industries. Reducing iron ore exports and making iron and manganese alloys, for exportation, we will have made a product that the whole world will use and which will give Brazil a profit incomparably greater than that obtained by the mere exportation of iron and manganese ores. Canada and the United States show us in their statistics the ever increasing exportation of iron and manganese alloys, instead of ore exports.

Russia, Brazil, India and Cuba are the possessors of the largest beds in the world. Germany and the U. S. A. are the principal importers of Brazilian manganese. Japan, which buys her ores from Russia, India and China, is already interested in our product.

During the great world war we exported as much as 500,000 tons per annum. Afterwards the manganese industry suffered a serious crisis, almost disappearing from the list of our exports. Of late years, however, much greater interest has been shown in manganese, its export figures reaching a very high level, at greatly improved prices.

### PRODUCTION OF MANGANESE

Quantity and value during the 1930-1937 period

Basis: 1925-1929 = 100

YEARS	QUANTITY		VALUE	
	Tons	Indexes	Contes of réls	Indexes
1930.....	192,122	63	14,486	50
1931.....	95,550	31	6,395	22
1932.....	20,835	7	1,309	5
1933.....	24,893	8	1,135	4
1934.....	2,300	1	134	0.4
1935.....	60,669	20	16,676	23
1936.....	168,000	54	6,000	56
1937.....	223,062	65	25,000	87

## MICA

**A**LTHOUGH exploited in Russia since the XVII Century, it was only in the XX Century that mica was discovered in Brazil, where its exploitation attained maximum development during the Great War. It afterwards declined, but at the present time is undergoing a new phase of expansion. Brazil occupies the 8th place on the list of mica producing countries. The whole of the Brazilian contribution to the world's supply comes from the State of Minas Gerais, where there are now more than a hundred beds in the course of operation. The principal purchasers of this useful Brazilian ore are Germany, U. S. A. and Japan.

## MINERAL WATERS

**O**UR mineral waters are able to hold their place with the most famous waters of the world, even being superior to those of France and Germany. We have alkaline, gaseous, sulphureous, ferruginous, arsenical, sulphuretted, iodous, etc. We do not even lack the high temperature or thermal waters, used on such a large scale for medicinal purposes.

Minas Gerais is, in Brazil, the State which has the greatest number of hydro-mineral spas, being able to become, for this very reason, the principal Watering Place and Touring Center in South America. Owing to the improvements made by the State Government at the Poços de Caldas spa, its sulphureous waters have a constant temperature of from 43° to 44° Centigrade. The waters of Araxá are celebrated in scientific circles all over the world, as a very important therapeutical cure for diabetes.

Although less in number, there are some excellent mineral water springs in the State of São Paulo: Prata and Platina, in the Prata region, their waters being similar to those of the famed springs at Vichy, France. Another famous spa in this State is at Lindoia, in the Campinas region, its waters being very radio-active.

The State of Rio de Janeiro has the Salutaris spring, in Paraíba do Sul, and, in Padua, the Atlantida spring, whose waters are iodated and the richest in therapeutical qualities, of all the waters on the American Continent, easily competing with those of the best European spas.

We give below the results of the official analysis of the principal mineral waters of Brazil.

### *Mineralization of the principal mineral waters of Brazil (per litre):*

Araxá, State of Minas Gerais (Sulphur Spring).....	4.3355
Prata, State of São Paulo.....	3.9868
Caldas do Cipó, State of Baía.....	1.6850
Caxambú, State of Minas Gerais.....	1.5570
Poços de Caldas, State of Minas Gerais.....	0.5744
Araxá, State of Minas Gerais (Radio — active Spring).....	0.1561
Lindoia, State of São Paulo.....	0.1028
Lambari, State of Minas Gerais.....	0.0420
Cambuquira, State of Minas Gerais.....	0.0180



*Alkalinity of the Brazilian alkaline-sulphur Springs (per litre):*

Patrocínio, State of Minas Gerais.....	634
Araxá, State of Minas Gerais.....	603
Poços de Caldas, State of Minas Gerais.....	068
Pocinhos do Rio Verde, State of Minas Gerais.....	067

*Thermality of the Brazilian alkaline-sulphur Springs (degrees):*

Pocinhos do Rio Verde, State of Minas Gerais.....	24
Araxá, State of Minas Gerais (Sulphureous Spring).....	34
Poços de Caldas, State of Minas Gerais (Pedro Botelho Spring)...	45
Patrocínio, State of Minas Gerais.....	23

*Radio-activity of the principal Brazilian Springs in units per litre:*

Araxá, State of Minas Gerais (Radio—active Spring).....	14.6
Araxá, State of Minas Gerais (Lagôa Spring).....	88.5
Araxá, State of Minas Gerais (Alkaline-Sulphur Spring n. 5).....	44.2
Caxambú, State of Minas Gerais (Dom Pedro Spring).....	43.3
Caldas da Imperatriz, State of Santa Catarina.....	41.62
Pocinhos do Rio Verde, State of Minas Gerais.....	28.04
Santa Clara, State of Paraná.....	18.68
Prata, State of São Paulo.....	13.25
Cambuquira, State of Minas Gerais.....	11.09
São Lourenço, State of Minas Gerais.....	4.08
Poços de Caldas, State of Minas Gerais.....	4.04
Lambary, State of Minas Gerais.....	2.08
Lindoia, State of São Paulo.....	2.05
Patrocínio, State of Minas Gerais.....	1.03

## NICKEL

**B**RAZIL will occupy, in the near future, an outstanding position in the world's production of nickel. This metal, which is used on a very large scale by different industries, at present comes from only two regions of the terrestrial globe: New Caledonia, a small French island in Oceania, and from the South of Canada. Almost all of the nickel used in the world, however, comes from Canada, only a tenth part of the world's supply being contributed by New Caledonia. Beds of highly valuable nickel ore have been found in Brazil and duly examined, some of them already being exploited with every indication of success.

At São José do Tocantins, in the State of Goiás, according to the appraisal of the Department of Mineral Production, there are 2,200,000 tons of nickel ore in the respective beds, at a depth of 10 meters. Said Government Department considers it to be very probable that the beds altogether contain ten million tons of ore. The principal beds in the State of Minas Gerais are those at Livramento, in the Municipality of Airacuoca, and at Barra Branca, in the Municipality of São Domingos do Prata. There are other important beds of nickel ore



in Brazil, such as those at Ipanema, in the State of São Paulo, of high mineral content, the beds at Paraíba do Sul, in the State of Rio de Janeiro, and those at Cascabulho, in the State of Baía.

Brazilian ore is represented by garnierite-hydro-silicate-coloidal of magnesium and nickel. The average content of the colossal beds at São José do Tocantins, is 5 %, but many of the beds have a much higher content, some of them attaining 12 % and 13 %.

## PEAT

**P**PEAT is an inferior kind of fuel, soft in consistency and dark gray in colour. It is the most recent of fossil fuels, of quaternary formation. The largest peat bogs in the world are to be found in Ireland, Germany, Russia and Finland. At the large plantation denominated Fazenda de São Sebastião, in the State of Rio de Janeiro, Brazil, the bogs were examined, same being computed to contain about 100,000 tons of peat. At Maraú, in the State of Baía, there is a peat basin whose extent is appraised at 706,000 m.<sup>3</sup>. It is thought to utilize said peat for the production of oils by means of distillation.

## PETROLEUM

**I**N the States of Mato Grosso, Paraná, Baía, Alagoas and Pará, and in the Territory of Acre, the Department of Mineral Production has made investigations, conceded aid grants and rendered assistance to private initiative in the search for petroleum.

In the State of Mato Grosso a preliminary geological survey was made in the marsh region, which is a prolongation of the Bolivian Chaco. In the State of Pará, borings were made on the Monte Alegre plain. In the State of Alagoas scientific prospecting was carried out in the sedimentary belt. The interpretation of the data thus obtained enabled the following conclusions to be drawn regarding the local regional structure:

a) The sediments show a thickness of more than 1,000 meters in the deepest parts of the sedimentary basin and 700 in the raised area along the coast near the port of Jaraguá.

b) Indications were obtained of an apparent raising, of anticlinal form, a few kilometers East of Maceió, in a North-Eastern direction.

The North-Eastern end of the structure tends towards the area in which research work has been carried out by the Cia. de Petroleo Nacional at Riacho Doce; the South-Western end reaches the ocean in the proximity of the port of Jaraguá. Ponta Verde, a few kilometers East of Jaraguá, is the nearest point on dry land to the axis of the structure.

The locality offers, besides other advantages, the probability of there being encountered the crystalline base at a depth of 800 meters, serving as an excellent point of reference for posterior structural studies and for the confirmation or revision of the geophysical data, and, moreover, easy and economical transportation for the boring equipment.

The second place in a condition to offer possibilities is to be found 4 kilometers N. E. of the Air France landing field.

The results obtained in the Acre region are frankly encouraging. The detailed geological studies and the topographical survey for the individualization of structures favourable to petroleum, so as to locate future borings, have been successfully brought to an end. The first borings are being made on the Moa Range, at a place about 10 kilometers above Gibraltar. The borings being made in this locality are capable of sinking wells to a depth of 1,500 meters.

In the State of Baía, the following was the conclusion arrived at by the field party of the Mineral Production Development Service, engaged in making geophysical studies at Reconcavo:

1) At the deepest part of the region studied there exists a layer of sediments of the 1,500 meter category.

2) Contact between the Fundamental Shield and the sediments which it supports occurs to the South-East on a steep slope or step structure.

3) About 1.5 Kms. to the North of Km. 45 on the Salvador-Feira highway, there is a domoide structure where it seemed advisable to locate the first petroleum test well in the Reconcavo district (1).

## PYRITE

**P**YRITE, sulphuret of iron, is of great importance for Brazil. We use it in the manufacture of sulphuric acid, which is absolutely indispensable to the chemical industry and for the defence of our country. We have, in the State of Minas Gerais alone, two great beds in the Municipality of Ouro Preto: the Agua Santa bed and that of Alto da Cruz. The first named bed supplies the Piquete powder factory, and the second one furnishes pyrite to the Companhia Electro-Química, which operates near Ouro Preto. Being provided with the most modern equipment, said company will increase its output more and more all the time.

## SALT

**T**HE economical policy adopted by the Metropolis, during the colonial era, greatly hampered the Brazilian salt production. In spite of being an essential human food, also necessary to cattle breeding, the commodity when not entirely lacking in certain regions used to be sold at such high prices as to make it quite inaccessible to the poorer classes.

In order to favour the European salt, the exploitation of salt beds and other salt deposits, some of them noted for their great possibilities, was made too difficult and the industry was kept within a severe monopoly or else rigid and absurd prohibitions were imposed.

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(1) — In January, 1939 positive proof was obtained of the existence of petroleum in Brazil. The technical experts of the Ministry of Agriculture, on boring a well at Lobato in the State of Baía alongside the "Viação Ferrea Federal Leste Brasileiro" (Federal Eastern Brazilian Railway), near the sea, found oil at a depth of 206 meters. The analysis made of the Bahian petroleum showed it to be a product having a parafine base, with a density of 0,81, very light and fluid, containing no water, impure substances or brimstone, but having a satisfactory proportion of gasoline. The gases which escape 60 meters below the shaft, discharge two liters per minute under a pressure of 3 lbs. per square inch, notwithstanding the fact that there is, on top of the bore, an enormous quantity of oil, forming a kind of liquid stopper, 180 meters thick.

Among the first steps taken by the Brazilian Government, soon after the Independence, with the purpose of encouraging the inceptive industries in the country, are a few relating to salt whose import came to a prohibition on behalf of the national product.

The most favorable zones for the production of salt, in Brazil, are in the North-East, as this is the region where evaporation is most intense.

Among the principal salt producing States, Rio Grande do Norte occupies the first place, having the largest number of salterns in Brazil. The States of Rio de Janeiro, Ceará, Sergipe, Baía, Maranhão and Paraíba come next on the list, in the order in which they are named.

The product of the majority of our salt-works is, in general, dry and of good quality, fully corresponding to the demands of the meat industry, as regards its purity and the effect it produces.

At the present time there are various types of salt on the market, but the proper parties are, however, cogitating on the adoption of a uniform policy regarding the salt improvement process, so as to obtain a type of salt as standardized as possible.

In the South of the country the big "Xarqueadas" (the establishments in Brazil where "Xarque" is prepared), all use National salt, which substitutes, in some cases advantageously, the Foreign product.

"Xarque", generally called in English jerked beef (in the Union of South Africa it is also known as "biltong", a South African Dutch word), is being produced on an ever increasing scale in Brazil, this National product being in great demand at home and abroad owing to its highly nutritious qualities.

#### PRODUCTION OF SALT

Quantity and value during the 1930—1937 period

Basis: 1925—1929 = 100

YEARS	QUANTITY		VALUE	
	Tons	Indexes	Contos of réis	Indexes
1930.....	333,777	107	3,915	126
1931.....	425,653	137	4,954	159
1932.....	510,175	164	7,244	234
1933.....	428,858	138	5,589	180
1934.....	280,573	90	4,729	152
1935.....	277,583	89	4,719	152
1936.....	494,119	159	10,871	349
1937.....	500,000	161	11,000	354

#### STEEL

**S**TEEL ranks among the eight leading Brazilian subsoil products computed for statistical purposes. In 1937 it contributed to the total of our mineral output with a share only surpassed by the figures relating to cement, gold and iron plates, pig iron, manganese and salt.

In addition to the steel and cast iron factories located in the State of Minas Gerais, there is a considerable number of mills and foundries in various points



of the national territory, mainly in the Federal District, São Paulo and Rio Grande do Sul.

By using iron and steel manufactured in the country, as well as those imported from abroad in rods, bars, plates, etc., our large metallurgical shops produce all kinds of hardware.

### PRODUCTION OF STEEL

Quantity and value during the 1930-1937 period

Basis: 1925—1929 = 100

YEARS	QUANTITY		VALUE	
	Tons	Indexes	Contos of réis	Indexes
1930.....	20,985	142	10,043	132
1931.....	23,130	157	10,934	144
1932.....	34,192	231	15,796	207
1933.....	53,567	363	24,646	324
1934.....	61,675	417	23,950	314
1935.....	64,231	435	25,278	332
1936.....	73,667	499	45,311	595
1937.....	80,979	517	54,180	711

### TITANIUM

**T**HE exploitation of titanium ore deposits for export purposes is now beginning to develop in Brazil. In 1937, rutile (titanium oxide) exports attained the eighth place on the list of our products sent overseas. Of late rutile has been used on a large scale in the manufacture of white pigment and its chloridated compounds.

In Brazil, titanium ore is mainly found in the State of Goiaz, on the large plateau which separates the waters of the Tocantins from those of the Paraíba, in the Municipalities of Pirinópolis, Corumbá, Anápolis, Bomfim, Ipamoré, Caldas, Campo Formoso, Pouso Alto and Morrinhos. Beds of this ore are to be found, in the State of Minas Gerais, in the Municipalities of Andrelandia, Araxá, and Diamantina. Titanium also appears under the form of ilmenite along a great part of the coast, between the mouths of the Paraíba and Pardo rivers, but always accompanied by muscovite, garnet, zirconite and quartz.

### ZIRCON

**Z**IRCON is used on a large scale in the manufacture of special steels and as refractory material. The exploitation of zircon beds is a very promising industry, this metal being sold in the market at the price of four hundred milréis per ton. The principal beds are those on the Poços de Caldas plateaux, in the State of Minas Gerais, and also in the monazitic areas of the State of Baía. Zircon ore is "Caldasite", composed of baddelzite and zirconite, which occurs in masses and botryoidal crusts. The content in  $ZrO_2$  varies



from 68 % to 86 %, but the rolled pebbles (known to those who mine this ore as "favas" or beans) contain from 92 % to 96 % of  $ZrO_2$ .

Pursuant to the calculations made, above mentioned beds contain more than 2,000,000 tons of zircon ore.

## OTHER MINERALS

**B**ESIDES the minerals previously, herein enumerated, there are still other metallic and non-metallic minerals in the country.

Regarding same, we will just mention the following:

**Asbestos** — This mineral, used in the manufacture of non-inflammable goods, is found at various beds in the States of Minas Gerais and Baía. It is not being, as yet, regularly exploited.

**Amianthus** — Is found in several Municipalities in the States of Baía and Minas Gerais.

**Tin** — We have numerous beds of tin, the principal ones, however, are at Encruzilhada, a Municipality of the State of Rio Grande do Sul, and in the State of Paraíba.

**Rock crystal** — Exists in abundance on the Serra Cristalina in the State of Goiaz, and at various places in the State of Minas Gerais. It is also to be found, although in smaller quantities, in other regions of the country.

**Rutile** — Although it is not, as yet, being exploited rationally on a large scale, rutile exists at various points in Brazil, principally in the State of Minas Gerais, where its beds cover large areas. On the exportation list of the State of Goiaz it figures as a by-product of the Diamond industry.

In some of the States of the Brazilian Union, principally Baía and Espirito Santo, there are exploited monazitic sands, from which thorium is extracted. This is a very useful mineral, being used in the manufacture of incandescent gas mantles.

The are also to be found in Brazil: Aluminium, Antimony, Asphalt, Beryl, Limestone, Lead, Graphite, Marble, Granite, Molybdenum, Platinum, Quicksilver, Wolfram (Tungsten), Zinc, etc.

# VEGETABLE PRODUCTS

## INTRODUCTORY

NO country can rejoice in the possession of a flora more opulent than that of Brazil. In same there are represented 50,000 species, that is to say  $\frac{1}{4}$  of those known in the world. Of said species, 22,767 are registered in the monumental work of Martius: *Flora Brasiliensis*, composed of 40 "in folio" volumes, i. e., 130 fascicles, started in 1840 and concluded in 1906, no less than 65 expert botanists having collaborated in same.

It is not only of the number of vegetable species which live in the woods and forests of Brazil, that we are proud.

There is no limit to the uses to which the components of Brazilian Flora can be put. Brazilian forests, which cover an area of more than 4,500,000 square kilometers, contain an abundance of raw materials, to an extent which nature has accumulated in no other part of the world. Professor Nicolau Vavilov, of Cornell University, one of the great world authorities on agricultural economy, during a visit to our country, made the following statement in regard to our forests: "The forest wealth of Brazil is, in quantity and quality, insuperable, and one may say that the problem of the forest has as much importance as that of agriculture".

There is not the slightest exaggeration in the statement of the eminent American professor The natural resources which Brazilian flora offers us are prodigious. While cultivated soil, although fruitful and highly productive, requires man to plant what he desires to reap, in the forests there exists wealth untold of the most varied species of raw materials in the form of alimentary, industrial, medicinal, forage and decorative plants, etc., almost all of which, for thousands of years, has been waiting to be used to the advantage of all concerned.

Adopting the Engler system with certain modifications which he has made in same, Professor A. J. Sampaio, of the National Museum, divides Brazilian flora into two *floral* or *geobotanic* provinces: one, *Amazonic Flora*, also called Brazilian Hylaea, and the other *General* or *Extra Amazonic Flora*.

Amazonic Flora belongs to the great humid equatorial forest that Humboldt called Brazilian Hylaea. Barbosa Rodrigues gave it the name of Amazonia. Amazonic Flora in Brazil is not solely confined to Amazonia, It also extends to

the Territory of Acre, States of Amazonas and Pará, and goes as far as the head-waters of the Amazon River tributaries, in the States of Mato Grosso and Goiás, and penetrates the State of Maranhão as far as Imperatriz.

In a general manner it comprehends the whole of the territory under the influence of the potomographic regime of the Amazon River. It occupies 4 % of our territory. In the Brazilian Hylaea or Amazonic Flora, the vegetation, at the first glance, presents itself under two distinct types:

Hard Forest Land and Cultivated Forest Plains. For this reason one can see that same has two zones: Lower Amazon and Upper Amazon.

General Flora extends beyond our frontiers, under the form of pampas or savannas to Uruguay, Argentina, Paraguay, Peru, Colombia, Venezuela and the Guianas. Its greatest area is represented by the Campos, which also invade the Brazilian Hylaea, even attaining the extreme North of the State of Amazonas. It occupies 60 % of our territory and comprehends six zones: Coconut zone, Catinga zone, Eastern or Sea coast forest zone, South Brazilian Araucaria or pine zone, Campos zone and Maritime zone.

### FEDERAL CONTROLLING ORGANS

In the part of this book subordinate to the heading "Agriculture", there is to be found full data on the organization of the Public Services engaged in the development of Brazilian vegetable production.

## BABASSÚ

THE babassú palm represents one of the principal items of the natural wealth of our country. It is calculated that in the State of Piauí alone there are more than 400,000,000 babassú palms and that the babassú palm groves of Maranhão occupy a quarter of the total area of said State, *i. e.*, 346,217 square kilometers. The homogenous babassú forests of Brazil are so large that one can travel by rail or by river day after day without seeing the end of same, such is their prodigious abundance. Each bunch has almost a thousand nuts and produces 600 grs. of oil. Said oil is raw material for the manufacture of soap, lubricants, edible fats, etc. For alimentary purposes it is a perfect substitute for olive oil. A million babassú palms can produce 281,000 tons of kernels.

As fuel oil, that of the babassú palm is superior to petroleum. The shells give one third of their weight as an excellent vegetable coal, with about 91 % of carbon, which burns approximately 8,000 calories and is smokeless just like anthracite. By distillation there are obtained various by-products of relative importance, such as tar. A list of industrial products from the shells and kernels of the babassú nut per one million plants, is given below:

Vegetable coal.....	82,000
Tar.....	12,000
Acetic Acid.....	10,000
Methylated alcohol.....	80,000
Oil or Butter.....	21,000
Cattle Cakes.....	14,000



## EXPORTATION OF BABASSÚ NUTS

Quantity and value during the 1926-1937 period

YEARS	Quantity (kilos)	VALUE	
		In milrêlé	Equivalent in pounds sterling
1926.....	22,687,000	18,146,129	533,150
1927.....	25,977,245	24,003,000	583,799
1928.....	19,266,076	20,409,000	500,804
1929.....	8,700,809	6,109,493	150,012
1930.....	12,296,183	8,654,673	197,748
1931.....	14,212,881	8,103,881	122,311
1932.....	8,916,927	5,086,340	71,003
1933.....	623,430	361,720	5,213
1934.....	217,176	183,547	1,905
1935.....	9,966,000	8,999,000	71,000
1936.....	30,760,291	39,121,974	311,252
1937.....	21,994,588	39,641,393	328,185

Quantity and value, according to destination in 1937

DESTINATION	Quantity (kilos)	Value (milrêlé)
Great Britain.....	54,390	108,522
United States.....	21,940,189	39,532,871
TOTALS.....	21,994,588	39,641,393

## BRAZIL NUTS

**B**RAZIL nut trees, which are so abundant in the Amazon forests, are tall trees and a great source of wealth. In the U. S. A., Brazil nuts, also known as Pará nuts, are in much greater demand on the market than the Portuguese varieties. The alimentary value of the nuts has made them a raw material in great demand in the confectionery industry and caused them to be exported on a very large scale. The analysis of the kernel shows that it contains: 17 % of digestible azoted substances, 67 % of fat, 7 % of hydrocarbonates, 4 % of mineral salts and 5 % of water. It has also been verified that the oil possesses 12.5 % of vitamins A and B and 1.5 % of vitamin C.

One hundred grammes of nuts produce 709 calories. According to those who have studied the matter, two Brazil nuts have an alimentary value equal to that of one egg. Bromotologic studies show that 200 grammes of Brazil nut kernels are sufficient to supply the daily ration of albuminoids needed by an adult.

The nut is exported in the shell, in bulk and in graded measurements of from 1 to 1½ hectolitres, and also without the shell, in boxes containing 30 kilos.



## EXPORTATION OF BRAZIL NUTS

Quantity and value during the 1926-1937 period

a) — With shell

YEARS	Quantity (kilos)	VALUE	
		In milréis	Equivalent in pounds sterling
1926.....	34,046,239	32,701,036	998,925
1927.....	15,275,145	28,722,881	697,847
1928.....	20,666,162	38,097,395	934,636
1929.....	32,248,200	37,216,165	913,676
1930.....	14,154,726	25,001,939	393,683
1931.....	29,448,531	39,913,286	607,358
1932.....	20,495,959	19,977,103	286,085
1933.....	28,695,161	28,481,292	366,374
1934.....	24,467,937	26,111,339	253,887
1935.....	27,401,000	38,533,000	305,000
1936.....	24,322,000	45,926,000	363,000
1937.....	13,145,371	47,498,141	416,000

b) — Without shell

YEARS	Quantity (kilos)	VALUE	
		In milréis	Equivalent in pounds sterling
1926.....	—	—	—
1927.....	—	—	—
1928.....	—	—	—
1929.....	454,471	1,671,000	41,067
1930.....	591,677	2,587,000	53,706
1931.....	2,842,000	9,951,000	137,000
1932.....	3,069,000	8,142,000	119,000
1933.....	4,656,000	10,758,000	129,000
1934.....	3,841,000	12,379,000	126,000
1935.....	6,261,000	34,084,000	264,000
1936.....	4,595,000	43,037,000	345,000
1937.....	3,546,690	32,016,205	273,000

Quantity and value, according to destination in 1937

a) — With shell

DESTINATION	Quantity (kilos)	Value (milréis)
Argentina.....	9,852	34,482
Australia.....	50,910	172,458
Canada.....	25,500	99,242
Germany.....	1,611,350	5,740,411
Great Britain.....	5,749,525	20,215,219
Japan.....	6,306	26,198
New Zealand.....	8,000	30,208
Portugal.....	1,556	6,413
United States.....	5,682,372	21,173,510
TOTALS.....	13,145,371	47,498,141

## b) — Without shell

DESTINATION	Quantity (kilos)	Value (mliréis)
Australia.....	66,582	642,813
Belgo-Luxemburg Union.....	750	4,062
Canada.....	140,610	1,363,302
Great Britain.....	61,800	609,789
Japan.....	90	630
Netherlands.....	1,500	20,250
New Zealand.....	100,201	952,427
Tasmania.....	16,800	147,450
Union of South Africa.....	70,221	579,327
United States.....	3,088,136	27,696,155
	3,546,690	32,016,205

## CARNAUBA

**H**UMBOLDT denominated the carnaúba palm the *tree of life* and the inhabitants of the North-East of Brazil call it the *tree of Providence*, for no other palm renders them greater benefits than the Carnaúba. Nothing is wasted, all of said palm being used to advantage. With its trunk there are made props, bridge pillars, lathes, beams, fence stakes and telegraph posts; its leaves have the most varied uses: roofing for rustic dwellings and as material for the manufacture of cordage, mats, fans, straw hats of various kinds and qualities, and bags locally known as "urús". With its silky resistant fibres there are made hammocks, nets; horse blankets, etc. and, with the resistant petiole, sacks, brushes and brooms are woven. Its seeds, on being roasted, produce oil and a coffee substitute. The roots, reduced to ashes, produce salt. The wax which transudes through the foliage constitutes its principal and most important product, being used for candle making, preparation of hides and footwear, polishing wood, manufacture of lubricating oils, soap, etc. etc.

It is the traditional extractive industry of the North-Eastern region of Brazil and for more than a century it has been one of our export products, for which up to the present day no substitute has appeared on the international market. In no other region of the world is the carnaúba palm to be found.

However, on being transplanted to other parts of Brazil, although it does not die, and even flourishes, yet it does not produce wax.

Wax is a means of defence of the palm, in dry places, against transpiration. The palm, in order to keep alive, tries to retain in its organism the little moisture imbibed from the earth and for this reason its foliage covers itself with wax, which impedes the transpiration of water through the leaf pores. In the regions where there is more moisture, evaporation being on a smaller scale, the palm has no need to defend itself against transpiration and therefore wax is not produced.

The carnaúba palm has, up to the present, been exploited by very primitive processes, but even so carnaúba wax has already won for itself the fifth place on the general list of the values of our export products. The invention of the Brazilian manufacturer Dermeval Rodrigues, denominated "Guarany Extractor", which has been very favourably received throughout the carnaúba

wax producing region, will greatly contribute towards the development of the extractive industry, effecting a noticeable economy in the cost of labour and improving hygienic conditions for the workers.

Recognizing the value of carnaúba wax, the American company Johnson S. A., the biggest carnaúba wax importing firm in the world, has mounted, in the State of Ceará, the first factory for the exploitation of same.

The carnaúba palm is to be found from Maranhão down to Baía, but its area of greatest density is in the States of Maranhão, Piauí, Ceará, Rio Grande do Norte and Alagôas. The carnaúba palm is noted for its longevity, as it lives for more than 200 years.

### EXPORTATION OF CARNAUBA WAX

Quantity and value during the 1926-1937 period

YEARS	Quantity (kilos)	VALUE	
		In milrêis	Equivalent in pounds sterling
1926.....	5,768,123	23,456,025	683,530
1927.....	7,033,620	31,656,764	769,555
1928.....	6,980,762	28,624,857	702,453
1929.....	6,432,686	24,765,864	608,308
1930.....	6,714,009	23,365,488	528,540
1931.....	7,470,983	23,776,395	356,792
1932.....	6,379,714	19,884,928	288,447
1933.....	6,874,606	21,569,789	274,920
1934.....	6,145,821	27,862,253	283,652
1935.....	6,607,000	48,264,000	395,000
1936.....	8,774,000	97,526,000	774,000
1937.....	8,941,838	96,821,869	788,000

Quantity and value, according to destination in 1937

DESTINATION	Quantity (kilos)	Value (milrêis)
Argentina.....	38,948	430,544
Australia.....	27,449	329,674
Belgo-Luxemburg Union.....	110,190	1,233,528
British India.....	546	6,008
Canada.....	44,814	513,898
Chile.....	2,040	20,400
Dantzig.....	5,187	57,059
Denmark.....	11,783	114,169
Egypt.....	2,112	23,958
France.....	459,503	4,868,026
Germany.....	337,146	3,578,768
Gibraltar.....	774	8,000
Great Britain.....	1,550,854	16,661,721
Italy.....	82,038	914,367
Japan.....	45,619	471,376
Lithuania.....	273	3,000
Netherlands.....	20,892	224,293
Poland.....	29,293	311,104
Portugal.....	17,294	185,963
Roumania.....	455	5,003
Sweden.....	23,719	280,740
Union of South Africa.....	44,250	449,619
United States.....	6,084,568	66,108,040
Uruguay.....	2,091	22,611
TOTALS.....	8,941,838	96,821,869



## CELLULOSE

**C**ELLULOSE is one of the raw materials in greatest demand on the world's markets. It is enough to say that cellulose pulp, extracted from vegetables, is a raw material used for making paper, just like vegetable silk. The paper making industry alone uses up 21,000,000 tons of cellulose, for the preparation of which no less than 76,866,000 cubic meters of wood are required. One can easily understand why the production of cellulose pulp is a universal problem and causes people to worry all over the world.

No re-planting having been done to substitute the trees cut down, in the producing countries, a rise in the market price of cellulose has naturally occurred the price always going up when there is a lack of available raw material. This state of affairs is, of course, accentuated by the ever increasing demand for paper.

Brazil has every probability of becoming one of the largest producers of cellulose pulp in the world, the country having a great number of vegetables suitable for the making of same. According to the studies made by the Companhia Melhoramentos de São Paulo, the percentage of cellulose produced by Brazilian woods is much higher than that obtained from European and Canadian woods. Several factories in Brazil already produce cellulose pulp made with National raw material, although the quantity made is less than that consumed on the home market. Here is a list of some of said concerns: Cia. Industrial Agrícola Coruputuba, S. A. Gordinho Braune, Companhia Santista de Papel, Cia. Industrias Brasileiras de Papel, Cia. Melhoramentos de São Paulo, in the State of São Paulo; Paraná Paper Company, in the State of Paraná, Cia. de Itajai, in the State of Santa Catarina.

In order to encourage the construction of cellulose factories in Brazil, the Government, in 1933, promulgated two decrees granting favors to the parties interested in the matter.

## FIBRES

**W**E have the most numerous and best species of fibres in the world. All of them are waiting for capital to be invested in their respective exploitation. Throughout our vast territory there are, growing wild, plants having excellent fibres, but, for the present, we have only small organized plantations of this kind in the States of São Paulo, Rio de Janeiro, Paraná, Baía and Pernambuco. We regularly use more than 200 million bags per annum for harvesting purposes. These figures show how important the cultivation of fibrous plants is for Brazil.

Among the very varied textile plants that we possess, one, the caroá, occupies an outstanding position owing to its abundance, good qualities and to the very peculiar fact that it grows admirably in the North-Eastern dry region, while the majority of other plants either die or survive with great difficulty. The caroá constitutes an incalculable source of natural wealth to aforesaid region, which is still almost unexploited, although it has been technically and scientifically demonstrated that its commercial exploitation is quite possible, owing to the undeniable fact that it is an excellent fibrous plant able to produce high



grade cellulose. In many respects it is superior to jute and can be considered as a legitimate substitute of hemp. Its use on a large scale would mean the solution of one of the most important problems connected with our economy, freeing us, in part, from the importation of Foreign fibres.

From the textile fibre of the caroá there can be obtained the proper material for the manufacture of various kinds of bags, superior quality paper, vegetable silk, cables, canvas, carpets, mats, packing thread and string. In the opinion of experts, caroá fibre products are three times more resistant than those made of jute. In Caruarú, in the State of Pernambuco, the caroá industry has of late been rapidly developing on a very large scale.

The caroá, an immense natural source of wealth which dries up and rots away in the North-Eastern fields, is capable of giving employment to thousands of able workers and of making the fortune of hundreds of manufacturers who become imbued with the desire to duly exploit this magnificent fibre along modern lines.

### EXPORTATION OF PIASSAVA

Quantity and value, during the 1926-1937 period

YEARS	Quantity (kilo)	VALUE	
		In milrêis	Equivalent in pounds sterling
1926 .....	3,999,513	3,763,026	11,274
1927 .....	4,097,800	3,719,656	90,504
1928 .....	3,963,587	3,652,306	89,625
1929 .....	4,141,943	4,596,207	112,908
1930 .....	4,343,895	3,879,525	87,141
1931 .....	4,809,230	3,827,358	55,323
1932 .....	3,603,053	2,702,797	39,606
1933 .....	4,288,828	3,348,722	41,858
1934 .....	4,725,877	4,453,966	45,515
1935 .....	4,567,824	5,150,590	41,504
1936 .....	4,872,885	7,602,873	60,647
1937 .....	5,118,564	8,957,908	73,932

Quantity and value, according to destination in 1937

DESTINATION	Quantity (kilo)	Value (milrêis)
Argentina .....	123,780	167,956
Belgo-Luxemburg Union .....	603,676	1,057,374
Dantsig .....	2,032	3,800
Denmark .....	160,790	296,212
France .....	21,915	28,883
Germany .....	1,236,227	2,251,179
Great Britain .....	1,576,315	2,797,428
Italy .....	2,600	6,000
Netherlands .....	111,525	214,914
Portugal .....	481,366	703,232
Sweden .....	4,072	9,000
Union of South Africa .....	6,105	10,276
United States .....	721,734	1,335,305
Uruguay .....	66,427	76,349
TOTALS .....	5,118,564	8,957,908

## GUARANA'

**G**UARANA' is a Brazilian plant of the Amazon region. Because of the salubrious properties of its seeds, guaraná deserves to be rationally and intensively grown in aforesaid region, in order to make same become one of the most important products of its marvellous flora. When its numerous good qualities are more widely known, and the well deserved fame of its life prolonging properties has spread to new markets, the demand for guaraná will naturally increase and, simultaneously, on a very large scale, the figures relating to this product on our exportation list. Guaraná is a real strengthening aliment and stomachic remedy, most refreshing to run-down systems. It does not, like alcoholic beverages, create a state of temporary stimulation, followed by nervous depression, but, on the contrary, acts as a true tonic for the nervous system. Notwithstanding the fact that its caffeine content is high, it does not cause insomnia or nervousness. On being analysed, Guaraná was found to contain, in every 100 grammes:

Cafeine.....	5.388
Fixed yellow oil.....	2.950
Red resin.....	7.800
Red colouring element.....	1.520
Amorphous element.....	0.050
Saponine.....	0.060
Guaraná acid —Tanic.....	5.902
Pyrous acid — guaraná.....	2.750
Starch.....	9.350
Glycose.....	0.777
Pectine, dextrine, salts, etc.....	7.470
Vegetable fibre.....	49.125
Water.....	7.650

### EXPORTATION OF GUARANA'

Quantity and value during the 1925-1937 period

YEARS	Quantity (kilos)	VALUE	
		In milrêis	Equivalent in pounds sterling
1925.....	4,944	57,281	1,413
1926.....	6,613	80,602	2,271
1927.....	5,497	68,137	1,653
1928.....	7,473	111,940	2,744
1929.....	15,361	258,513	6,350
1930.....	17,706	419,051	9,499
1931.....	23,839	392,535	6,688
1932.....	9,337	67,819	963
1933.....	27,314	235,355	3,097
1934.....	31,840	405,730	4,153
1935.....	52,205	384,265	3,195
1936.....	53,354	404,307	2,247
1937.....	30,034	293,230	2,477

## Quantity and value, according to destination in 1937

DESTINATION	Quantity (kilos)	Value (milréis)
Argentina.....	648	2,400
Germany.....	7,183	80,874
Great Britain.....	2,040	18,160
Poland.....	20,040	190,320
United States.....	123	1,476
TOTALS.....	30,034	293,230

## JARINA

THE jarina palm (*Phytelephas microcarpa*) is very abundant in the Amazon region and in the Territory of Acre and will become an important source of revenue in our country. It is also known as vegetable ivory, because of the hard horny substance of its nuts, same being very similar to animal ivory, There is no better raw material available anywhere for making buttons and, both in Brazil and in Europe there are factories which use jarina exclusively.

## EXPORTATION OF JARINA

## Quantity and value during the 1926-1937 period

YEARS	Quantity (kilos)	VALUE	
		In milréis	Equivalent in pounds sterling
1926.....	72,625	57,830	1,796
1927.....	16,468	13,119	320
1928.....	30,277	21,359	524
1929.....	10,005	2,531	62
1930.....	100,840	20,975	437
1931.....	40,653	21,200	270
1932.....	10,080	4,032	62
1933.....	—	—	—
1934.....	26,535	8,560	88
1935.....	45	312	2
1936.....	—	—	—
1937.....	51,564	26,261	224

## Quantity and value, according to destination in 1937

DESTINATION	Quantity (kilos)	Value (milréis)
Argentina.....	48,533	13,783
France.....	2,541	11,812
Great Britain.....	490	666
TOTALS.....	51,564	26,261



## JUTE

**W**E spend about one hundred thousand contos abroad, per annum, in the purchase of jute, a fibre which has no substitute in the manufacture of canvass and other bags, sacks, etc. Notwithstanding the existence of numerous indigenous fibres, useful for many purposes, we are obliged to import jute, especially for making our coffee bags, of which we need a couple of hundred million bags per annum.

After exhaustive experiments with seeds imported from India, Japanese settlers in the interior of the State of Pará, in the Municipality of Parintins, obtained a few jute sprouts which grew rapidly, showing an admirable adaptability to our climate. There was finally selected, in the Amazon region, a kind of jute which is superior to the Indian product. Near Andira, in the Amazon region, the plants easily attain a height of 4 meters, being very robust, quite able to withstand the effects of the rains, and producing fibres on a much larger scale than the Oriental plants.

In 1938 the Amazon region produced 500,000 kilos of jute; in 1939 it will probably produce 2,000,000 kilos. According to jute planters, this fibre, in the State of São Paulo, gives a bigger profit than cotton.

The Ministry of Agriculture, has spared no efforts to encourage and aid jute planting so that, in the near future, we will be able to supply our own needs and not have to import any jute at all.

## MATE (Brazilian Tea)

**T**HIS is one of our great sources of natural wealth. It belongs to the group of plants of spontaneous vegetation and is mainly found in the States of Paraná, Santa Catarina, Mato Grosso and Rio Grande do Sul. It is the principal source of revenue of the State of Paraná and the main item on its exportation list. A thousand grammes of mate leaves contain: 16.75 of caffeine; 65.13 of bitter substance; 0.179 of essential oil; 2.500 of aromatic principles and 6.720 of saccharine. Its composition shows that mate is a beverage whose use can only be beneficial, without doing the slightest harm to the organism. It contains much less caffeine than Indian tea and is therefore a wholesome stimulant which can be freely imbibed without the inconvenient after effects caused by excessive tea drinking. The digestive and diuretic properties of mate are widely known. Its good qualities and low cost will certainly cause mate to be consumed in the near future on a much larger scale than at present.

Argentina, Uruguay and Chile are the principal importers of this health giving Brazilian tea. Mate is exported in two forms: the one known on the local market as "beneficiado" (*i. e.*, after having been duly treated at the mate mills and, in this improved condition, packed in barrels, tins, etc.) and scorched, or "cancheado" as mate in this form is denominated locally, after having undergone the drying by fire process. When this health giving Brazilian beverage is exported scorched, it undergoes further treatment at the hands of the importers abroad.



## EXPORTATION OF MATE

Quantity and value during the 1926-1937 period

YEARS	Quantity (kilos)	VALUE	
		In milréis	Equivalent in pounds sterling
1926 .....	92,657,164	114,219,777	3,323,439
1927 .....	91,092,172	109,921,439	2,676,671
1928 .....	88,180,319	114,935,414	2,820,582
1929 .....	85,972,127	106,358,788	2,612,829
1930 .....	84,845,764	95,352,081	2,139,500
1931 .....	76,759,952	93,643,456	1,348,110
1932 .....	81,400,096	86,987,908	1,273,990
1933 .....	59,222,396	63,420,257	807,263
1934 .....	64,702,357	71,525,751	734,750
1935 .....	61,500,000	66,330,000	543,000
1936 .....	66,601,000	64,074,000	511,000
1937 .....	65,519,000	66,347,000	552,000

## Quantity and value, according to destination in 1937

a) — "Improved"

DESTINATION	Quantity (kilos)	Value (milréis)
Argentina .....	1,591,145	1,938,563
Australia .....	5,209	6,499
Belgo-Luxemburg Union .....	3,396	4,000
Bolivia .....	6,957	7,524
Chile .....	8,729,531	9,580,332
Cuba .....	3,706	7,173
Finland .....	1,199	1,200
France .....	156,995	198,033
Germany .....	326,654	337,912
Great Britain .....	77,316	96,059
Hong-Kong .....	734	844
Netherlands .....	2,294	2,460
Poland .....	4,771	5,833
Portugal .....	6,923	8,652
Sweden .....	3,310	3,986
Union of South Africa .....	3,419	4,002
United States .....	30,309	44,261
Uruguay .....	18,164,669	21,525,329
TOTALS .....	29,118,537	33,772,662

b) — "Cancheado" (Scorched)

DESTINATION	Quantity (kilos)	Value (milréis)
Argentina .....	32,370,044	29,059,050
Chile .....	89,920	94,416
Germany .....	12,000	11,242
Uruguay .....	3,928,171	3,409,536
TOTALS .....	36,400,135	32,574,244

## OITICICA

**T**HE oiticica is a new source of natural wealth for Brazil and is genuinely North-Eastern, its habitat being in that region of our country, where it has been known for centuries, growing for preference on the banks of rivers and brooks. It bravely resists the droughts and, just like the joazeiro, keeps its foliage green while all the other vegetation in the neighbourhood dies owing to the heat of the sun during the dry season. From its nuts there is extracted a very useful siccative oil, similar to the tung or wood oil of the Chinese, of extraordinary value for numerous uses in the paint and varnish industry. The oiticica oil extracting industry is already an important source of wealth for the North-Eastern region of Brazil, and no less than 19 factories are engaged in same, using as much as 70,000,000 kilos of raw material, and producing 20,000,000 kilos of oil per annum.

More than 30,000 contos of reis are invested in this industry, which fact constitutes a proof of its value in the economy of said region, Aforesaid industry can still be greatly developed, for this oil, thanks to its extraordinary qualities, will always find an open market throughout the world, being superior to all other oils available for the paint and varnish industry.

## RUBBER

**R**UBBER has already occupied the position of one of the most important items on the list of Brazilian exports. The very vast plantations in the East Indies, principally in Ceylon, started with seeds taken clandestinely from our country, caused, however, a great crisis in our rubber business and the demand for our product suffered a very heavy drop on the markets of the world. However, the rubber business is now rapidly recuperating its old position. The States of Amazonas and Pará, which have in the "hevea" their major source of wealth, are now imbued with hope for the advent of a new period of frank prosperity in the near future. In Pará the great rubber plantations belonging to the Ford Company, under the guidance of experts, will ably do their best to enable Brazil to regain her old outstanding position on the markets of the world, with a product whose quality is greatly superior to that of Ceylon rubber.

In the States of Amazonas and Pará, in the North-East of Mato Grosso and in the Territory of Acre, we have about 300,000,000 of native "hevea" plants, covering an area of more than 1,000,000 square miles and whose production capacity is appraised at 600,000 tons.

This immense source of wealth has, up to the present, hardly been touched, but the Federal Government is now actively trying to solve the rubber industrialization problem and to take all the steps necessary for the standardization of the product, having rubber plants constructed in the States of Amazonas and Pará. On there being obtained a type of rubber suitable for export purposes, its demand will certainly be very greatly increased on overseas markets, because no other rubber in the world has the resistance and elasticity qualities possessed by our product. Argentina and Uruguay alone use 11,000 tons per annum and they will certainly make their rubber purchases in Brazil if we offer them a standardized product at a reasonable price.

## EXPORTATION OF RUBBER

Quantity and value during the 1931-1937 period

YEARS	QUANTITY (tons)	VALUE	
		In contos of réis	Equivalent in pounds sterling
1931.....	12,623	25,599	375,000
1932.....	6,220	10,623	155,000
1933.....	9,453	21,687	263,000
1934.....	11,150	33,642	342,000
1935.....	12,370	36,064	292,000
1936.....	13,247	68,015	543,000
1937.....	14,793	76,001	630,000

## TIMBER

OUR timber list is a very long one. No other country in the world possesses such excellent, beautiful and resistant species as we do.

For the construction of the Palace of Peace at the Hague, the principal nations of the world assumed the obligation of helping with their respective contributions. Brazil offered its precious timber.

The numerous species of Brazilian wood constitute magnificent material for general construction work and shipbuilding, but as a rule do not grow in groups, nor are they to be encountered as woods of a single species.

On the contrary, they are to be found scattered through the forests, on the anfractuons slopes of the ranges and on the higher levels of the mountains, which fact makes the logging industry somewhat difficult.

There is, in the majority of cases, no immediate relation between the number of species and that of the individual trees which represent same.

The principal species of Brazilian timber are classified as follows:

*Leguminosae* — Jacarandá roxo, jacarandá preto, jacarandá tan, jacarandá rosa, jacarandá cabiuna, Jacarandá amarelo, vinhatico, pau ferro brauna or maria preta, óleo vermelho, guarabú or pau roxo, angelim, pau Brasil, sucupira, cabreuva, angico, óleo pardo, monjolo, jacaré, pau campeche, jatobá, acapú, garapa e imburana.

*Apocinaceae* — Pau setim, aderno, guatambú, peroba, peroba paulista, peroba preta, peroba de folha larga, peroba amarela and peroba de Goiaz.

*Anacardiaceae* — Gonçalves Alves, aroeiras, cajú gigante and cajú mirim.

*Meliaceae* — Cedro vermelho, cedro branco, cangerana, camboatá or carapateira.

*Bignoneaceae* — Ipé tabaco, ipé roxo, ipé amarelo, ipé do brejo, ipé flor verde or cinco folhas and pau d'arco.

*Lauraceae* — Canela batalha, canela parda, canela preta, canela cedro, itauba verdadeira, louro amarelo, louro vermelho, louro preto, etc.

*Myrtaceae* — Jequetibá.

*Sapotaceae* — Massaranduba do Pará, massaranduba verdadeira, marmeleiro do mato and guajará.

*Coniferae* — Pinho (Pine).



Among the different species of Brazilian timber, the "Jacaranda" (Rose wood), "Pinho" (Pine) and the various kinds of "Peroba" (Aspidosperma — sps.) are worthy of special mention.

The first named is our most precious kind of timber. It is used for high class cabinet making, inlaid woodwork and pianos, being utilized, besides this, for many other purposes in the higher branch of joinery.

Pine (*Araucaria brasiliana* — Rich.), denominated "Pinho" in Portuguese, constitutes one of the main sources of wealth of the State of Paraná, occupying an outstanding place on the exportation list of said State.

No other wood is more useful, and no other is used in Brazil on a larger scale than the different kinds of "Peroba" (*Aspidosperma* — sps). This timber is used for housebuilding, flooring, furniture making — the greater part of the furniture on the market being made, at least in part, of same. The different kinds of "peroba" are also used in shipbuilding, *i. e.*, for the construction of small sea and river vessels.

#### PRINCIPAL SPECIES OF BRAZILIAN TIMBER USED FOR RAILWAY SLEEPERS

SPECIES	Specific weight	Resistance per cm <sup>2</sup> (kilos)	Average duration (years)
Oleo vermelho.....	954	765	12.0
Canela preta.....	785-960	680	12.0
Aroeira do Sertão.....	1,220	1,010	11.5
Oleo pardo.....	650	550	11.5
Jacarandá.....	1,198	780	11.5
Urucurana.....	860-1,098	850	11.3
Piúna.....	960	—	11.2
Sucupira.....	860-1,060	940	11.2
Ipé tabaco.....	980-1,150	980	11.0
Canela Sassafraz.....	1,020-1,130	790	11.0
Jatobá roxo.....	908	85	11.0
Peroba rosa.....	930	804	11.0
Guaradina parda.....	1,060	—	10.9
Jatobá roxo.....	706	720	10.9
Canela parda.....	863-990	540	10.8
Massaranduba.....	1,080	770	10.6
Angelim pedra.....	960-1,450	650	10.4
Oiti.....	790	540	10.3
Guarabú.....	850-980	620	9.8

#### EXPORTATION OF RAILWAY SLEEPERS Quantity and value during the 1926-1937 period

YEARS	Number	VALUE	
		In milréis	In pounds sterling
1926.....	59,140	402,487	12,602
1927.....	506,639	3,076,511	74,838
1928.....	494,383	2,772,483	68,056
1929.....	686,768	3,982,418	97,820
1930.....	772,511	4,262,968	100,646
1931.....	54,910	334,902	4,923
1932.....	11,276	449,698	6,190
1933.....	12	100	1
1934.....	5,347	42,215	432
1935.....	564,096	98,021	748
1936.....	1,200	284	2
1937.....	350,974	40,826	357



## EXPORTATION OF RAILWAY SLEEPERS

Quantity and value, according to destination in 1937

DESTINATION	Quantity (kilos)	Value (milréis)
Uruguay.....	326,824	37,826
Portugal.....	24,150	3,000
TOTALS.....	350,974	40,826

## EXPORTATION OF LOGS

Quantity and value, according to destination in 1937

DESTINATION	QUANTITY (kilos)	VALUE (milréis)
Argentina.....	2,019,204	253,678
Belgo-Luxemburg Union.....	39,700	7,900
Colombia.....	5,438	1,088
Falkland Island.....	10,800	2,060
Finland.....	17,000	3,400
France.....	36,532	8,142
Germany.....	43,379	12,774
Great Britain.....	16,417	3,319
Japan.....	2,700	875
Netherlands.....	61,200	11,085
Poland.....	7,200	600
Portugal.....	497,799	45,986
Sweden.....	39,314	12,040
Uruguay.....	563,078	101,314
United States.....	33,995	9,707
TOTALS.....	3,393,756	474,068

# ANIMAL PRODUCTS

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## INTRODUCTORY

**A**LTHOUGH there are no available statistics, as yet, to enable us to properly appraise the development of the National industries based on products and by-products of our fauna, one cannot fail to recognize the relative economic importance of same at various places in Brazil. This favorable state of affairs is brought about in great measure by the surprising wealth of our fauna, in which kingdom there are to be found representatives of all the principal congenerous kinds inhabiting the terrestrial globe.

We stress the circumstance of the importance of the development of aforesaid industries still being relative because, in view of our practically inexhaustible natural resources, in this respect, our revenue from above mentioned branches of commerce and industry may still be considered as insignificant.

We already have, however, although on a small scale, the commerce of articles made with the skins of crocodiles, and those of various of the larger kinds of snakes and fish. The water rat supplies felt for hat making (and hats made in Brazil are quite as good, both in quality and style, as those manufactured at the best factories in the world). The variety and wealth of Brazilian avifauna has created a plume goods industry which is being regularly developed. The feathers of certain Brazilian birds, because of their suggestive and attractive colouring, are products well placed on our exportation list owing to the ever-increasing demand for same on Foreign markets. The plumage of said birds is eagerly sought after by manufacturers of ornamental and fancy goods of the more expensive kind.

Hunting and fishing adepts encounter in Brazil unlimited opportunities for the practice of their respective activities.

Professor Ihering head of the North-Eastern Committee of Pisciculture, which has studied with very great interest the problem of the protection and breeding of fish in Brazil, thus refers to our immense possibilities, as regards pisciculture:

"The fisherman in Europe or the United States, obtains, in a hectare of water, about 500 kilos of fish per annum, at the cost of expensive artificial feeding. In Brazil the "curimã" fish ponds, when well organized, produce in a year and a half, from 1,500 to 1,600 kilos of fish, without the expense of feeding ! The

pirarucú, native of the Amazon River and its tributaries, figures among the best known fish; it is eaten either dried or salted, being an excellent substitute for salted cod, with greater nutritive value, and with a better flavour, delicacy of tissue and digestibility."

### FEDERAL CONTROLLING ORGANS

The Hunting and Fishing Service, which, in the Ministry of Agriculture, is subordinate to the National Department of Animal Production, is the Federal organ that manages, directs and supervises everything connected with hunting and fishing on Brazilian territory.

Although only very recently created and installed (in 1933) said Service has already filed in its archives a notable amount of useful data and studies on the questions under its jurisdiction and has ably contributed to the task of supplying the Government with proper information for its guidance in the adoption of measures tending to improve the economic and social conditions of the agents of production, commerce, industry and consumption of the products of hunting and fishing.

The Governmental measures adopted in the last eight years caused, in a high degree, as was natural, a favourable economic and social reaction in circles connected with the industry and commerce of fishing and even in the volume of production of the fisheries themselves.

Brazilian fishermen are organized in 364 Fishing Colonies affiliated to 18 Federations, which, in their turn, are under the direct control of the General Confederation of the Fishermen of Brazil.

The rendering of social and economic assistance may be appraised by the data given below, relating to 1937:

a) — the medical Post of the Federal District attended to 2,196 clients. filled 6.197 prescriptions, dressed 1,504 wounds, took care of 17 surgical cases of lesser gravity, made 349 laboratory examinations, 468 applications of ultra-violet rays and gave 2,122 injections of various kinds;

b) — there functioned with due regularity, in 17 States of the Union, about 376 schools for the children of fishermen, with 14,568 pupils matriculated;

The institution of Federal Fish Marts and the promulgation of the law regulating Establishments for the sale of Fish, gave quite a strong impulse to this branch of commerce.

For the purpose of making investigations, within the country, on the breeding of National fish of real economic value, the Federal Government is constructing a Pisciculture Station, at Pirassununga, in the State of São Paulo, on the banks of the Mogy-guassú River, and is taking steps for the installation of another one in the State of Rio Grande do Sul.

Up to now only carp breeding has produced practical results. At Pindamonhangaba, in the State of São Paulo, there functions, subordinate to the Inspectorate of Hunting and Fishing, of said State, a Carp Breeding Station, to act as an incentive for the development of this industry.

For the benefit of fishermen there will be constructed, before the end of the current year, at Jurujuba, in the State of Rio de Janeiro, a Professional Fishing School, to give technical instruction to fishermen, in accordance with the project presented to H. E. Dr. Fernando Costa, Minister of Agriculture, by the Committee designated to carry out the necessary studies.

In the part of this book subordinate to the heading "Live-stock" there is given full information on the organization of all the other Public Services engaged in the development of Brazilian stock breeding and allied industries.

### IMPORTATION OF PRESERVED FISH

Quantity and value during the 1925-1937 period

YEARS	Quantity (kilos)	VALUE	
		In milrêis	In pounds sterling
1925.....	816,764	2,963,649	74,711
1926.....	761,619	2,575,633	75,568
1927.....	560,904	2,299,078	55,955
1928.....	928,166	3,601,153	88,363
1929.....	835,600	3,100,739	76,170
1930.....	624,473	1,948,766	44,598
1931.....	358,183	1,293,835	19,543
1932.....	461,664	1,320,217	19,413
1933.....	435,021	1,608,829	20,808
1934.....	478,681	2,096,646	21,367
1935.....	992,884	6,001,470	42,050
1936.....	1,244,783	7,764,639	54,935
1937.....	1,328,329	7,664,286	58,54

### IMPORTATION OF CODFISH

Quantity and value during the 1925-1937 period

YEARS	Quantity (kilos)	VALUE	
		In milrêis	In pounds sterling
1925.....	22,781,374	53,240,841	1,333,311
1926.....	36,977,928	63,177,968	1,850,407
1927.....	36,087,962	66,568,285	1,618,974
1928.....	41,103,189	80,864,375	1,984,448
1929.....	37,780,170	78,607,103	1,931,279
1930.....	35,391,884	69,004,862	1,584,890
1931.....	22,399,368	45,526,492	738,061
1932.....	26,340,139	42,968,439	606,388
1933.....	26,162,157	43,646,420	580,580
1934.....	18,792,634	36,713,928	370,912
1935.....	17,158,000	38,727,000	295,000
1936.....	22,996,000	50,033,000	352,000
1937.....	21,080,000	51,308,000	389,000





# *AGRICULTURE*



## INTRODUCTORY

**V**ARIOUS circumstances, not only of an historical and social order but also related to the very nature and conditions of the country, have determined, alongside our evolution, a marked preponderance of agriculture among the principal elements forming the Brazilian nationality. We have been, since the early days of our existence, an agricultural people.

The intensive cultivation of sugar cane in the Northeast constituted the basis of our agricultural wealth during the colonial period, characterizing the Brazilian society by certain features which marked deeply its spirit and formation. Until the time of the gold and diamond mines rushes, in the XVII century, sugar conditioned the vitality of our economy, the production of other agricultural commodities being hardly sufficient even for the scanty local consumption.

Later on, coffee came to be the staple product of Brazilian exportation, owing to the transiency of the outburst of sylvatic rubber in the Amazonian regions. By finding the most favourable conditions along the Paraíba do Sul region and then throughout the whole Paulista plateau (São Paulo), coffee farming shifted the economic hegemony from the North to the South, attaining an absolutely steady predominance among the remaining cultures as the most ponderable factor in the development of the country's external trade to the extent of supplying us with two thirds of our available gold.

The last fifteen years, however, have been from several angles marked as a period of intensive renovation towards Brazilian agriculture. Notwithstanding the acceleration recorded ever since the Great War in the rhythm of our industrial evolution, we have passed to devote a very special attention to rural activities by the increment of polyculture and technical improvement of the methods of agricultural work. Cotton began to contribute in considerable proportions to our interchange with foreign markets, its percentage rising fast both volume and value of our external trade.

The Nation is now entirely free from monoculture, whether that of sugar in the North or Coffee in the South. A variety of crop cultivations is becoming victoriously steady in the spheres of our rural activity. By the equilibrium of its agricultural and manufacturing forces, by the organization of its productive classes, by the intensification of the measures relating to modern agronomic technique, Brazil proceeds ensuring uninterrupted progress to its agriculture, which was always so closely attached to the dynamism of our historical and social "processus".



The following notes show in broad lines the assistance the Federal administrative organs are giving to private initiative, in a sector so directly connected with the national wealth expansion as is that wherein the country's agricultural activities are developed.

### FEDERAL CONTROLLING ORGANS

The successful action of the *Ministerio da Agricultura* (Ministry of Agriculture) has proved a far-reaching boon and a deciding factor in the progress of Brazilian economy. The activities of the three main technical organs which form the Ministry's organization (1), viz., the *Departamento Nacional da Produção Mineral* (National Department of Mineral Production), the *Departamento Nacional da Produção Vegetal* (National Department of Vegetable Production), and the *Departamento Nacional da Produção Animal* (National Department of Animal Production) comprise large sectors of the country's economical life, which are mostly to be found under the influence of said organs.

The services attributed to the Departments handling the mineral and pastoral production are referred to in other sections of this volume ("Mineral Products" and "Live-stock"). The following will touch only the organization of the National Department of Vegetable Production, which has its purposes and objectives more closely connected with the development of agriculture in Brazil. This Department of the Ministry of Agriculture is composed of the following specialized divisions: 1) *Serviço de Fomento da Produção Vegetal* (Encouragement of Vegetable Production Service); 2) *Diretoria de Ensino Agrícola* (Directorate of Agricultural Education); 3) *Serviço de Fruticultura* (Orchard Service); 4) *Serviço de Plantas Textéis* (Fibre-Producing Plants Service); 5) *Serviço de Defesa Sanitária Vegetal* (Vegetable Sanitary Defense Service); 6) *Serviço de Irrigação, Reflorestamento e Colonização* (Irrigation, Reforestation and Colonization Service); 7) *Serviço Técnico do Café* (Coffee Technical Service); 8) *Instituto de Química Agrícola* (Institute of Agricultural Chemistry); 9) *Instituto de Biologia Vegetal* (Institute of Vegetable Biology).

The Institute of Agricultural Chemistry has since long been engaged in the study of Brazilian conditions with a view of improving the yield of our crops. By means of chemical and biological procedures and field experimentation of fertilizers, etc., the Institute reached at conclusions of most interest in connection with numerous cultivations carried on in the country.

The Institute of Vegetable Biology has its seat at the Botanical Garden of Rio de Janeiro, a great scientific centre which by various attributes honours the Brazilian Capital. The Garden is probably one of the most notable institutions of the kind in all the world. The Institute is composed of sections of Botany, Phytopathology, Agricultural Entomology, Genetic and Agricultural Ecology and is the controlling organ in the country for all such branches of biology applied to agriculture. Among the principal accomplishments of the Institute are noteworthy the organization of an herbarium and a mycological and phytopathological museum, the study of several diseases of our cultivated plants and the establishment of university extension courses and specialization training.

The competence of the Vegetable Sanitary Defense Service is most extensive and comprehensive. It is either connected with the vegetable inspection or with the agricultural defense or control properly speaking. The service is provided with various technical sections as well as with Posts for agricultural

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(1) — In December, 1938, there was issued by the President of the Republic a Decree-Law creating new divisions in the Ministry of Agriculture and regrouping and reconstituting those already existing.

defense and fumigation. Phytosanitary research stations are to be found in a great many points of the country aiming chiefly at protecting national farming against introduction and spread of plant disease and pests.

By means of technical assistance to farmers; by cooperative work in cultivating fields established within farmers' premises; by production and distribution of selected seeds, grafts and seedlings; by survey of farmer's conditions throughout the different regions of the country and the divulgation of farming methods more adequately fit to an efficient work in every agricultural zone; by exhibitions and seed competitions; by selling agricultural machinery and implements by installments; by awarding prizes, etc., the Ministry of Agriculture, through the activities of the Encouragement of Vegetable Production, Orchard, Fibre-Producing Plants Services and the Coffee Technical Service, everyone in the sector of its specialized operations, has greatly contributed to foster the vegetable production.

Quite noticeable in this respect is the continuous and efficient work which is being developed by the Inspectorates and Sub-Inspectorates of Agriculture in their various circumscribed areas. They convey to rural properties technicians and their expert instructional advice in order to intensify the development of plantations and crops and to improve methods of cultivation.

The Orchard Service has played a salient part in technical guidance and in fostering fruit production throughout the country by rational methods. Such an intensive action is reflected on the ever-increasing importance this kind of agricultural exploitation is invested with the most ponderable repercussion over our internal and external trade system, enlarging our exports and decreasing fresh fruit imports. Numerous experimental stations and fields of cooperation in private properties, where instructional work is provided along with technical information available to regional fruit growers are to be found in many parts of the territory. The inspection of fruit is made right at the orchards, packing houses and all the places through which exportation is handled, and it aims at ensuring good quality of the product to be sent abroad. There have also been installed cold storage plants for fruit similar to those to be found in the best exporting ports of the world. Those plants will not only prepare the fruit for long voyages, by preventing decomposition, but will also serve to regulate the systematic disposal of fruit for export.

No lesser comprehensive and efficient in its scope of activity is the Coffee Technical Service, under the guidance of which the various types of this main staple product were led to a considerable improvement.

The Irrigation, Reforestation and Colonization Service is expanding its work along a scheme of far-reaching practical features. Educational facilities are provided and the Service assists and controls all the developments in these fields devoting considerable attention to the problems therewith connected.

In the last of the three foregoing administrative services, the action of the Brazilian Government is characterized by a policy tending to slack-off the urban drift and sending back to the country the elements who flow into the cities in the hope of finding and occupation that might afford them an easier way of living or who are simply attracted by the allurements of the metropolis.

Decree N.º 19,482, of December 1930, among other provisions inspired by such a policy, made extensive to agriculturalists with family favours similar to those granted to immigrants in colonial zones. The Government provided also for prompt utilization of the farm called "Fazenda Nacional de Santa Cruz", in the Federal District, the lots of which were not under cultivation. Later on, some nuclei of colonists were created at São Bento and Tingui which will in the near future constitute large centres for the supply of staple commodities to



the population of the capital of the country. In addition to the three forementioned nuclei there are still eleven others in several points of the national territory.

In order to foster irrigation in the country a conspicuous stride was taken by the issue of the "Water Code", in which, according to principles already established in the Brazilian Constitution, every means and method of using waters for any purpose whatsoever was regulated or provided for with far-reaching social and economical objectives. The Ministry of Agriculture has been fostering as much as possible the irrigating practice by mechanical lifting in cooperation with rural proprietors.

The Reforestation Section of the Irrigation, Reforestation and Colonization Service comprises the following establishments: "Horto Florestal do Distrito Federal", "Horto Florestal de Ubajára", Ceará; "Horto Florestal de Ibura", Sergipe; and "Horto Florestal de Lorena", São Paulo.

Among the main duties of the foregoing divisions outstand those related to the following activities: to spread widely the means of defending and exploiting rationally the forests; to establish the forestry régime in a more adequate basis and suited to the different zones of the country in relation to national, state, municipal or private forests; to make the register of the forests, belonging to the Union, and to study the establishment of national parks with a view to defend and preserve the indigenous flora and fauna; to propose the reforestation wherever necessary; to propose the most urgent and opportune measures for the development of the forestry industry; to proceed to the study of the woods and their classification, their industrial uses and output; to supply, by means of a previously established contribution, to States, Municipalities and private concerns, indigenous and exotic seeds and seedlings of essences most suitable to the different regions of Brazil; to organize the forestry map, determining the regions which ought to constitute the forest reservations of the Union; to divulge, by means within the province of the establishments, principles of silviculture applied to Brazil; to control, in collaboration with other public departments, the execution of the Forestal Code.

The "Horto Florestal" is an establishment through which the formation, replacement, treatment, conservation, protection and rational exploitation of forests are promoted to secure the maximum possible results for the economic future of forestry in general. With these purposes in view such institutions are provided with an herbarium and collections of indigenous essences of local flora and with most notable exotic species for the supply of seedlings. They also possess an ecological station. Within their jurisdictional area they render all the necessary assistance to those concerned, so that better methods of silviculture may be adopted and made adaptable to the region; they contribute for the reforestation work in the area under operation; they investigate, preferably, the woody flora of the region, the soils, blooming seasons, fructification, seeds, ramification, etc., and keep nurseries, shelters and other equipment necessary for the study of essences aiming at the following objectives: a) formation of forest massifs; b) investigation into silvicultural requirements; c) determination of methods for utilization of forest products; d) acclimatization of exotic species; e) production of seeds and seedlings which are sold at a previously prefixed low fee. The reforestation work may be carried out outside the area under the jurisdiction of the "Hortos" over the lands belonging either to the Union, the States, Municipalities and private concerns, by agreement between the responsible individuals and the competent authorities.

By Decree N.º 23,793, of 23rd January, 1934, the "Florestal Code" was approved, and, in virtue of its provision in art. 101, the Forest Council was created with the following functions: a) to advise the forestal authorities on

the utilization of resources from the forestry funds; *b*) to promote and care for the faithful observance of the Code and laws, or complementary regulations, cooperating with the forest authorities, and to report on needs or deficiencies of services or on requirements in public interest; *c*) to resolve cases unforeseen in the Code and to propose to the Government amendments or any alteration whatsoever; *d*) to issue opinion on important questions which the forestry bureau may have to decide upon and on cases whenever asked by the Government and as provided for by the Code; *e*) to promote the cooperation of the Public Powers, institutions and institutes, concerns and private societies in the forests preservation and replanting work; *f*) to diffuse throughout the country forest education and protection to nature in general; *g*) to establish prizes of encouragement to silviculture and to reward services rendered in connection with the protection of forests; and *h*) to promote an yearly tree celebration, the "Festa da Arvore", and to organize congresses of silviculture.

The Directorate of Agricultural Education is composed of two technical sections, the first entrusted with the matters relating to higher and medium educations and the second with everything that concerns the elementary grade in agricultural teaching activities.

The duties of the first section are complex and are carried on along the following lines: *a*) studies and organization of education; *b*) operation and inspection of Agricultural Schools; *c*) training courses in the country and abroad; *d*) swift courses for agriculturalists and professionals engaged in rural industries; *e*) register of diplomas, titles, certificates of agricultural professionals and the control of farming professions.

It is incumbent upon the second section to guide and control the establishments of agricultural elementar instruction subordinated to the Directorate of Agricultural Education and to inspect such establishments belonging to the States, Municipalities or private institutions.

The Federal Government maintains ten instructional establishments which are under its direct jurisdiction. They are named "Aprendizados Agrícolas" and have the function to prepare overseers and rural labourers. They are located in the Territory of Acre and in the States of Pará, Paraíba, Pernambuco, Alagoas, Sergipe, Bahia, Rio de Janeiro, Minas Gerais and Rio Grande do Sul.

### AGRICULTURAL STATISTICS

In almost the whole of the statistical tables appearing in this section the criterium adopted was to take the time referring to production as the year within which crops were harvested. It has been possible thus to avoid confusions that might arise from a biennial notation for characterization of the agricultural crops. Furthermore, the harvest-times often starting in one year and ending in another must be taken account of chiefly at the moment when the latest yield figures are ascertained and conclusive returns are obtained. It is therefore a reasonable procedure to conform crop statistics to this situation, *i. e.*, to have them refer only to the year in which crops are harvested.

Account ought also to be taken of the fact that in the tables which will follow here are included only — save exceptions — the principal products of the main Brazilian farming, that is, those resulting from agricultural work affording a permanente and trustworthy appraisal. Products of minor crops and others are thus excluded together with some horticulture items, the data of which are not suited for a sufficiently grounded statistical computation.

Regarding the value of production, it should be pointed out that the figure dealt with are weighted average values and that they correspond to prices ob-



tained from producers. These data are the results of a permanent canvass by the Serviço de Estatística da Produção (Production Statistical Service) of the Ministry of Agriculture. The inquiries were made among farmers and through special reporting and administrative agencies established throughout the country.

### AGRICULTURAL PRODUCE OF BRAZIL

#### a) — Quantity

PRODUCTS	UNIT	QUANTITY		
		Average 1929/1933	1936	1937
Aguardente (Rum).....	Litre	120,496,722	120,163,700	132,518,000
Alcohol.....	Litre	51,511,341	69,170,480	59,146,400
Alfalfa.....	Ton	158,836	137,623	149,030
Bananas.....	Bunch	67,858,000	73,569,300	79,993,800
Barley.....	Kilo	9,397,780	11,085,000	12,000,000
Beans.....	60 kilo bags	11,951,183	13,753,010	14,070,960
Cocoa.....	60 kilo bags	1,380,349	2,111,280	1,981,670
Coconuts.....	Fruit	130,281,532	140,512,800	141,358,300
Coffee.....	60 kilo bags	26,082,419	26,284,100	22,483,690
Cotton seed.....	Ton	261,227	820,268	946,314
Grapes.....	Kilo	(1) 221,176,333	201,677,000	211,258,000
Maize.....	60 kilo bags	88,083,232	95,353,370	96,630,590
Mamona (castor-oil seed).....	Kilo	—	154,691,900	167,412,800
Manioc.....	Ton	(1) 5,013,500	4,946,850	5,218,505
Manioc flour.....	60 kilo bags	16,927,686	14,604,610	15,522,370
Oats.....	Kilo	11,283,244	13,450,000	14,650,000
Oranges.....	Case	19,522,580	34,888,650	36,982,170
Pineapples.....	Fruit	79,109,800	90,697,000	90,881,200
Potatoes.....	Ton	340,033	335,006	328,877
Raw cotton.....	Ton	112,157	351,543	405,563
Rice.....	60 kilo bags	17,821,136	20,226,330	20,755,480
Rye.....	Kilo	16,624,780	15,430,000	16,000,000
Sugar.....	60 kilo bags	17,365,769	16,986,187	15,666,513
Sugar cane.....	Ton	15,898,474	18,496,420	15,736,580
Tobacco.....	Kilo	96,436,708	90,804,820	86,995,850
Wheat.....	Kilo	153,528,877	143,554,000	145,218,800
Wine.....	Litre	73,856,084	85,757,400	77,360,000

#### b — Value

PRODUCTS	VALUE (contos of réis)		
	Average 1929/1933	1936	1937
Aguardente (Rum).....	55,067	97,428	113,490
Alcohol.....	30,299	56,175	44,328
Alfalfa.....	43,702	35,810	41,878
Bananas.....	103,844	103,988	117,479
Barley.....	3,459	4,034	3,244
Beans.....	273,535	332,074	360,962
Cocoa.....	98,228	126,007	118,644
Coconuts.....	22,686	30,605	32,875
Coffee.....	2,577,902	2,253,819	1,940,401
Cotton seed.....	87,278	277,122	319,423
Grapes.....	(1) 110,249	79,968	73,747
Maize.....	976,076	1,134,293	1,369,428
Mamona (castor-oil seed).....	—	76,268	85,333
Manioc.....	(1) 409,941	502,529	538,120
Manioc flour.....	228,865	272,238	311,311
Oats.....	4,021	4,222	4,378
Oranges.....	198,059	356,126	383,196
Pineapples.....	21,550	22,211	24,148
Potatoes.....	136,318	136,121	132,210
Raw cotton.....	287,133	1,185,253	1,379,211
Rice.....	327,806	667,862	726,094
Rye.....	5,715	4,854	5,920
Sugar.....	510,610	676,922	670,541
Sugar cane.....	345,299	428,230	388,502
Tobacco.....	174,333	178,712	188,195
Wheat.....	67,176	49,747	69,610
Wine.....	53,855	75,164	69,307

(1) — Average of the 1931-1933 period.

Note — The 1937 data is subject to rectification.

# ALFALFA

**T**HE cloverlike plant which is used for fodder and is known, in the New World as alfalfa, and in the Old World as lucern, is grown in Brazil mainly in the four States whose climatic conditions and soil are quite suitable to its production.

Said States are, according to the amount of alfalfa produced: Rio Grande do Sul, São Paulo, Santa Catarina and Paraná.

Although on a smaller scale and so not included in the statistical data, alfalfa (lucern) is also grown in other regions of the country.

## PRODUCTION OF ALFALFA

a) — Quantity

GEOGRAPHICAL ZONE AND FEDERATED UNITS		QUANTITY (tons)		
		Average 1929/1933	1936	1937
South.....	São Paulo.....	11,600	11,833	18,000
	Paraná.....	2,374	2,200	2,500
	Santa Catarina.....	7,526	10,000	13,000
	Rio Grande do Sul.....	137,336	113,590	115,530
	TOTALS.....	158,836	137,623	149,030
BRAZIL.....		158,836	137,623	149,030

b) — Value

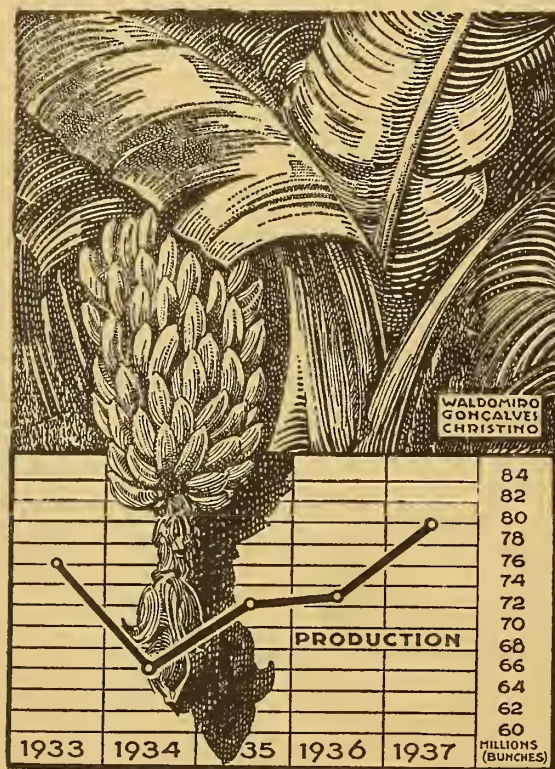
GEOGRAPHICAL ZONE AND FEDERATED UNITS		VALUE (contos of réis)		
		Average 1929/1933	1936	1937
South.....	São Paulo.....	4,212	4,142	6,300
	Paraná.....	897	770	875
	Santa Catarina.....	2,936	2,500	3,510
	Rio Grande do Sul.....	35,657	28,398	31,193
	TOTALS.....	43,702	35,810	41,878
BRAZIL.....		43,702	35,810	41,878

Note — The 1937 data is subject to rectification.

## BANANAS

**B**ANANAS have since long been under wide cultivation in our country. Almost all of the States grow bananas, but the largest plantations are to be found on the Southern part of the coast, between Rio de Janeiro and São Francisco, in the State of Santa Catarina. As the banana contains albumen,

starch, potash, sodium, carbonates and chlorides, it is a complete aliment. For this reason, in several countries, the people make bananas a basic part of their alimentation. Many varieties are grown in Brazil, but only one kind, the variety popularly known as the "nanica" (dwarf), "d'agua" (water) or "ca-turra" (obstinate), figures on the exportation list. The Municipality of Santos is the greatest producer of bananas in the country, as it has more than five million trees. Besides the bananas, there is being exported banana flour, which has found a ready market, principally in Argentina. Increasing the number of banana trees, we will find to be a most profitable task. Although the banana tree did not originate in Brazil, no other land is more suitable than ours for its proper growth and development.



Besides its fruit, the banana tree has excellent fibers, which, in the near future, will doubtless be used for numerous industrial purposes.

### PRODUCTION OF BANANAS

a) — Quantity

GEOGRAPHICAL ZONES AND FEDERATED UNITS		QUANTITY (bunches)		
		Average 1931/1933	1936	1937
North	Territory of Acre.....	87,567	85,000	95,000
	Amazonas.....	309,833	430,000	420,000
	Pará.....	984,900	900,000	950,000
	Maranhão.....	656,600	450,000	480,000
	Piauí.....	437,733	482,700	500,000
TOTALS.....		2,476,633	2,347,700	2,445,000



## PRODUCTION OF BANANAS

a) — Quantity

GEOGRAPHICAL ZONES AND FEDERATED UNITS		QUANTITY (bunches)		
		Average 1931/1933	1936	1937
North-East.....	Ceará.....	656,633	700,000	600,000
	Rio Grande do Norte.....	773,500	645,700	640,000
	Paraíba.....	718,667	450,000	458,000
	Pernambuco.....	2,422,500	4,800,000	4,000,000
	Alagoas.....	437,800	980,000	1,350,000
	TOTALS.....	5,009,100	7,575,700	7,048,000
East.....	Sergipe.....	538,433	580,000	550,000
	Baía.....	2,397,900	2,600,000	2,700,000
	Espírito Santo.....	437,900	400,000	450,000
	TOTALS.....	3,374,233	3,580,000	3,700,000
South.....	Rio de Janeiro.....	12,588,300	14,376,600	16,650,500
	São Paulo.....	34,297,900	26,630,000	30,000,000
	Paraná.....	4,398,467	4,400,000	4,500,000
	Santa Catarina.....	2,665,767	3,800,000	3,850,000
	TOTALS.....	53,948,434	49,206,600	55,000,500
Central.....	Mato Grosso.....	328,267	350,000	1,250,300
	Goiás.....	602,600	680,000	700,000
	Minas Gerais.....	7,357,400	9,829,300	9,850,000
	TOTALS.....	8,288,267	10,859,300	11,800,300
BRAZIL.....		73,096,667	73,569,300	79,993,800

b) — Value

GEOGRAPHICAL ZONES AND FEDERATED UNITS		VALUE (contos of réis)		
		Average 1931/1933	1936	1937
North.....	Territory of Acre.....	49	102	114
	Amazonas.....	248	366	378
	Pará.....	739	990	1,093
	Maranhão.....	427	383	480
	Piauí.....	394	434	500
	TOTALS.....	1,857	2,275	2,565
North-East.....	Ceará.....	951	910	780
	Rio Grande do Norte.....	1,083	904	928
	Paraíba.....	1,078	720	733
	Pernambuco.....	4,513	8,160	6,800
	Alagoas.....	569	980	1,485
	TOTALS.....	8,194	11,674	10,726
East.....	Sergipe.....	808	928	830
	Baía.....	3,597	4,420	4,590
	Espírito Santo.....	788	760	855
	TOTALS.....	5,193	6,108	6,325
South.....	Rio de Janeiro.....	18,879	14,377	19,148
	São Paulo.....	52,842	46,271	51,600
	Paraná.....	6,598	7,040	7,200
	Santa Catarina.....	3,999	4,940	5,198
	TOTALS.....	82,318	71,628	83,146
Central.....	Mato Grosso.....	427	455	1,952
	Goiás.....	784	884	945
	Minas Gerais.....	10,300	10,964	11,820
	TOTALS.....	11,511	12,303	14,717
BRAZIL.....		109,073	103,988	117,479

Note — The 1937 data is subject to rectification.



## EXPORTATION OF BANANAS

Quantity and value during the 1927-1937 period

YEARS	Quantity (bunches)	VALUE	
		In milrêis	Equivalent in pounds sterling
1927.....	4,427,282	12,657,912	308,008
1928.....	5,303,150	15,661,946	384,338
1929.....	5,807,856	18,361,150	451,078
1930.....	7,087,353	21,786,867	493,389
1931.....	7,855,792	23,172,947	338,201
1932.....	6,872,267	19,769,840	287,162
1933.....	8,535,924	22,778,187	293,339
1934.....	9,012,147	21,754,799	220,495
1935.....	10,682,895	29,407,851	236,051
1936.....	11,326,478	27,743,845	221,000
1937.....	11,310,922	27,790,734	231,000

Quantity and value, according to destination in 1937

DESTINATION	Quantity		Value (milrêis)
	Bunches	Kilos	
Argentina.....	8,362,984	166,749,110	20,576,462
Belgo-Luxemburg Union.....	41,315	830,380	101,755
Germany.....	171,000	3,455,000	419,000
Great Britain.....	1,896,105	38,036,350	4,648,695
Netherlands.....	51,839	1,036,780	126,037
Uruguay.....	787,679	15,519,580	1,918,785
TOTALS.....	11,310,922	225,627,200	27,790,734

## BARLEY

THE importance of barley growing began to be felt in Brazil, and in many other countries as well, during the period of the Great War, when the difficulties encountered by those who wished to import the foreign product greatly prejudicated the national breweries. Argentina and other South American countries, finding themselves in the same position, *i. e.*, unable to obtain product from overseas, also started to develop this branch of National agriculture.

Although barley growing has been, of late years, carefully attended to, in Brazil, especially in the States of Paraná, St. Catarina and Rio Grande do Sul, whose climates are quite appropriate for same, still National production does not correspond to even two thirds of our needs. To prove this, it is sufficient to show the data relating to 1937, in which year Brazil produced about 10,000 tons of barley and imported about 15,000 tons of this hardy owned cereal.

Brazil however, on the list of South American Barley growing countries, occupies the third place, coming immediately after Argentina and Chile. The size of the crops are not, as yet, in accordance with the great possibilities of the country as a whole, for not only the three States hereinbefore mentioned, but also the States of São Paulo, Goiaz and Minas Gerais are perfectly able to produce barley on a very large scale indeed and will doubtless do so in the near future owing to the patriotic spirit with which all concerned are imbued.

## PRODUCTION OF BARLEY

## a) — Quantity

GEOGRAPHICAL ZONE AND FEDERATED UNITS		QUANTITY (kilos)		
		Average 1929/1933	1936	1937
South.....	Paraná.....	940,380	900,000	1,000,000
	Santa Catarina.....	125,800	125,000	400,000
	Rio Grande do Sul.....	8,331,600	10,060,000	10,600,000
	TOTALS.....	9,397,780	11,085,000	12,000,000
BRAZIL.....		9,397,780	11,085,000	12,000,000

## b) — Value

GEOGRAPHICAL ZONE AND FEDERATED UNITS		VALUE (contoe of réle)		
		Average 1929/1933	1936	1937
South.....	Paraná.....	423	450	500
	Santa Catarina.....	56	63	200
	Rio Grande do Sul.....	2,980	3,521	2,544
	TOTALS.....	3,459	4,034	3,244
BRAZIL.....		3,459	4,034	3,244

Note — The 1937 data is subject to rectification.

## BEANS

ACCORDING to the opinion of the majority of botanists, beans originated in South America. The place where they were first grown is not known but everything indicates that Brazil is the birthplace of the most important legume. Brazilian soil is so fruitful that it produces beans twice a year, same being planted from September to October, the first crop, denominated “feijão das águas” (water beans), being harvested between January and February; the second crop being sown in January, February or March and harvested from April to June.

All the States of the Brazilian Union grow beans, but the States of São Paulo, Rio Grande do Sul and Minas Gerais are, however, the greatest producers of this popular vegetable. There are many varieties of beans. Red beans are nowadays grown,— not only in tropical, but also in sub-tropical countries, and even in cold climates such as, for example, Sweden.

Although our bean crops are very large, almost all of them are consumed in the country, none being exported. During the Great War, however, bean exports, in one year alone, reached 71,000 tons.

## PRODUCTION OF BEANS

a) — Quantity

GEOGRAPHICAL ZONES AND FEDERATED UNITS		Quantity (60 kilo bags)		
		Average 1929/1933	1936	1937
North .....	Territory of Acre.....	21,973	17,000	20,000
	Amazonas.....	47,256	13,500	20,000
	Pará.....	8,640	20,000	21,000
	Maranhão.....	45,132	15,000	20,000
	Piauí.....	91,940	58,600	60,000
	TOTALS.....	214,941	124,100	141,000
North-East.....	Ceará.....	312,015	300,000	280,000
	Rio Grande do Norte.....	107,080	80,000	75,000
	Paraíba.....	174,721	260,000	254,610
	Pernambuco.....	289,198	336,620	343,570
	Alagoas.....	169,534	176,250	162,580
	TOTALS.....	1,052,548	1,202,870	1,115,760
East.....	Sergipe.....	137,880	13,000	13,500
	Baía.....	385,149	300,000	350,000
	Espírito Santo.....	89,957	380,000	400,000
	TOTALS.....	612,986	693,000	763,500
South.....	Rio de Janeiro.....	203,306	300,100	420,980
	São Paulo.....	3,639,564	3,060,300	3,000,000
	Paraná.....	582,872	550,000	600,000
	Santa Catarina.....	249,795	200,000	250,000
	Rio Grande do Sul.....	2,737,211	2,701,630	2,690,000
	TOTALS.....	7,612,748	6,812,230	6,960,980
Central.....	Mato Grosso.....	41,690	100,000	99,720
	Goiás.....	426,466	380,000	400,000
	Minas Gerais.....	1,989,804	4,470,810	4,590,000
	TOTALS.....	2,457,960	4,950,810	5,089,720
BRAZIL.....		11,951,183	13,783,010	14,070,960

b) — Value

GEOGRAPHICAL ZONES AND FEDERATED UNITS		Value (centos of réis)		
		Average 1929/1933	1936	1937
North .....	Territory of Acre.....	423	408	504
	Amazonas.....	1,001	324	516
	Pará.....	209	540	592
	Maranhão.....	1,082	405	564
	Piauí.....	1,981	1,512	1,620
	TOTALS.....	4,696	3,189	3,796
North-East.....	Ceará.....	7,752	7,560	7,560
	Rio Grande do Norte.....	2,466	2,160	2,025
	Paraíba.....	4,715	7,644	7,638
	Pernambuco.....	11,785	11,599	10,307
	Alagoas.....	5,451	5,816	5,365
	TOTALS.....	32,169	34,779	32,895

## PRODUCTION OF BEANS

a) — Value

GEOGRAPHICAL ZONES AND FEDERATED UNITS		Value (contos of réis)		
		Average 1929/1933	1937	1937
East.....	Sergipe.....	3,010	359	373
	Baia.....	9,619	7,740	9,450
	Espirito Santo.....	1,970	9,804	10,800
	TOTALS.....	14,599	17,903	20,623
South.....	Rio de Janeiro.....	4,589	9,183	11,072
	São Paulo.....	92,998	91,809	90,000
	Paraná.....	11,476	10,560	12,600
	Santa Catarina.....	5,291	3,360	4,500
	Rio Grande do Sul.....	53,426	45,391	64,560
	TOTALS.....	167,780	160,303	182,732
Central.....	Mato Grosso.....	809	2,100	2,356
	Goiás.....	8,397	6,840	8,400
	Minas Gerais.....	45,085	106,960	110,160
	TOTALS.....	54,291	115,900	120,916
BRAZIL.....		273,535	332,074	360,962

Note — The 1937 data is subject to rectification.

## EXPORTATION OF BEANS

Quantity and value during the 1925-1937 period

YEARS	Quantity (klloe)	VALUE	
		In mltrés	Equivalent in pounds sterling
1925.....	94,021	119,366	2,864
1926.....	823,440	674,777	20,085
1927.....	83,795	48,332	1,175
1928.....	53,290	64,299	1,579
1929.....	42,861	39,408	968
1930.....	565,079	525,022	11,064
1931.....	339,504	179,877	2,910
1932.....	69,370	28,401	379
1933.....	38,407	24,575	285
1934.....	228,340	110,994	1,137
1935.....	187,235	83,708	1,000
1936.....	458,090	400,648	3,159
1937.....	66,880	64,530	535



## EXPORTATION OF BEANS

Quantity and value, according to destination in 1937

DESTINATION	Quantity (kiloe)	Value (milré)
Bolivia.....	10,940	8,280
Colombia.....	32,360	39,714
France.....	17,880	10,796
Mozambique.....	300	300
United States.....	5,400	5,440
TOTALS.....	66,880	64,530

## CITRUS FRUITS

NO other country in the world has soil more suitable for the cultivation of citrus fruits than we have. Although all the States of the Brazilian Union produce oranges, only of late years has citrus fruit growing really developed in Brazil. The Federal District and the States of Rio de Janeiro, São Paulo, Minas Gerais and Baía, are the components of the Brazilian Union which have most greatly distinguished themselves in this branch of rural activities. According to statistics there are 12,000,000 orange trees in Brazil. Within a few years this number will be incomparably greater and we will have one of the largest orangeries in the world, because the Brazilian product, owing to its magnificent qualities, finds a ready sale everywhere.

Our oranges ripen exactly at the time when those from Spain, Italy and the U. S. A. are no longer to be found on the European market, a state of affairs which greatly favors the expansion of our product. It was with Brazilian seeds that California planted the first orangeries, which went afterwards into immense plantations. The efforts we have made of late, enable us to foresee that very soon now, Brazil's contribution to the world's orange output will be incomparably greater.

Continuing to do its very best to efficiently encourage the cultivation of citrus fruits, the Ministry of Agriculture is cogitating about the construction, at the port of Santos, in the State of São Paulo, of a modern cold storage plant, on a very large scale, a typical measure which will efficiently take care of the necessary defence of the product.

## PRODUCTION OF ORANGES

## a) — Quantity

GEOGRAPHICAL ZONES AND FEDERATED UNITS		Quantity (cases)		
		Average 1931/1933	1936	1937
North.....	Territory of Acre.....	6,033	7,500	8,000
	Amazonas.....	63,833	82,400	90,000
	Pará.....	184,600	230,000	235,000
	Maranhão.....	65,587	70,000	72,000
	Piauí.....	21,500	32,500	35,000
	TOTALS.....	341,533	422,400	440,000
North-East.....	Ceará.....	25,787	75,000	70,000
	Rio Grande do Norte.....	7,833	12,340	12,000
	Paraíba.....	51,767	35,000	40,860
	Pernambuco.....	553,933	820,000	800,000
	Alagoas.....	26,067	55,000	58,000
	TOTALS.....	665,367	997,340	980,860
East.....	Sergipe.....	28,433	15,000	16,000
	Baía.....	457,467	500,000	550,000
	Espírito Santo.....	44,133	55,000	60,000
	TOTALS.....	530,033	570,000	626,000
South.....	Rio de Janeiro.....	7,010,867	10,200,000	9,890,790
	São Paulo.....	12,207,600	13,301,500	15,000,000
	Paraná.....	870,467	1,000,000	1,200,000
	Santa Catarina.....	1,420,067	2,000,000	2,100,000
	Rio Grande do Sul.....	1,518,067	2,368,860	2,171,430
	TOTALS.....	23,027,068	28,870,360	30,362,220
Central.....	Mato Grosso.....	25,866	40,000	170,090
	Goiás.....	18,967	25,000	28,000
	Minas Gerais.....	262,133	3,963,550	4,375,000
	TOTALS.....	306,966	4,028,550	4,573,090
BRAZIL.....		24,870,967	34,888,650	36,982,170

## b) — Value

GEOGRAPHICAL ZONES AND FEDERATED UNITS		Value (contos of réis)		
		Average 1931/1933	1936	1937
North.....	Territory of Acre.....	52	71	76
	Amazonas.....	550	783	855
	Pará.....	1,803	2,231	2,280
	Maranhão.....	545	665	684
	Piauí.....	179	299	333
	TOTALS.....	2,929	4,049	4,228
North-East.....	Ceará.....	223	863	805
	Rio Grande do Norte.....	70	111	108
	Paraíba.....	472	315	409
	Pernambuco.....	5,039	7,790	7,600
	Alagoas.....	237	523	551
	TOTALS.....	6,041	9,602	9,473

## PRODUCTION OF ORANGES

b) — Value

GEOGRAPHICAL ZONES AND FEDERATED UNITS		VALUE (contos de réis)		
		Average 1931/1933	1936	1937
East.....	Sergipe.....	259	158	168
	Baía.....	5,609	6,750	7,425
	Espirito Santo.....	363	523	570
	TOTALS.....	6,231	7,431	8,163
South.....	Rio de Janeiro.....	77,014	89,760	92,973
	São Paulo.....	133,967	159,618	180,000
	Paraná.....	8,145	9,500	12,000
	Santa Catarina.....	13,298	19,000	19,950
	Rio Grande do Sul.....	14,077	24,873	19,760
	TOTALS.....	246,501	302,751	324,683
Central.....	Mato Grosso.....	196	360	1,397
	Goiás.....	165	225	252
	Minas Gerais.....	2,369	31,708	35,000
	TOTALS.....	2,730	32,293	36,649
BRAZIL.....		264,432	356,126	383,196

Note — The 1937 data is subject to rectification.

## PRODUCTION OF GRAPE FRUIT

a) — Quantity

GEOGRAPHICAL ZONES AND FEDERATED UNITS		QUANTITY (kilos)		
		Average 1931/1933	1936	1937
North-East.....	Ceará.....	76,667	30,000	20,000
	TOTALS.....	76,667	30,000	20,000
South.....	São Paulo.....	10,386,000	12,200,000	12,000,000
	Paraná.....	1,113,667	1,000,000	1,100,000
	Santa Catarina.....	4,895,000	6,000,000	6,200,000
	Rio Grande do Sul.....	199,363,333	174,860,000	184,288,000
	TOTALS.....	215,758,000	194,060,000	203,588,000
Central.....	Minas Gerais.....	4,283,333	7,587,000	7,650,000
	TOTALS.....	4,283,333	7,587,000	7,650,000
Sundry vineyards.....		1,058,333	—	—
BRAZIL.....		221,176,333	201,677,000	211,258,000

## PRODUCTION OF GRAPE FRUIT

b) — Value

GEOGRAPHICAL ZONES AND FEDERATED UNITS		VALUE (contos of réis)		
		Average 1931/1933	1936	1937
North-East.....	Ceará.....	71	30	20
	TOTALS.....	71	30	20
South.....	São Paulo.....	13,166	14,640	14,400
	Paraná.....	1,183	1,000	1,100
	Santa Catarina.....	3,739	5,100	5,270
	Rio Grande do Sul.....	86,513	52,458	46,072
	TOTALS.....	104,601	73,198	66,842
Central.....	Minas Gerais.....	4,559	6,740	6,885
	TOTALS.....	4,559	6,740	6,885
Sundry vineyards.....		1,018	—	—
BRAZIL.....		110,249	79,968	73,747

Note — The 1937 data is subject to rectification.

## EXPORTATION OF GRAPE FRUIT

Quantity and value according to destination in 1937

DESTINATION	QUANTITY		VALUE	
	Cases	Kiloe	In milréis	Equivalent in pounds sterling
Belgo-Luxemburg Union.....	11,174	424,212	245,828	...
Bermuda.....	450	18,000	9,900	...
Canada.....	7,460	276,400	164,120	...
France.....	6,621	251,598	145,662	...
Germany.....	2,996	119,840	65,912	...
Great Britain.....	226,267	8,663,026	4,977,514	...
Netherlands.....	2,860	110,858	62,920	...
Sweden.....	715	28,170	15,730	...
TOTALS.....	258,543	9,892,104	5,687,586	49,529



## EXPORTATION OF ORANGES

Quantity and value during the 1927-1937 period

YEARS	Cases	VALUE	
		In milrêls	Equivalent in pounds sterling
1927.....	359,837	5,909,536	144,185
1928.....	560,906	10,012,639	245,787
1929.....	943,351	15,307,253	376,279
1930.....	812,207	16,075,677	355,370
1931.....	2,054,302	47,552,722	658,322
1932.....	1,930,138	40,179,070	610,710
1933.....	2,554,258	54,894,171	650,744
1934.....	2,631,827	56,189,240	563,955
1935.....	2,640,420	61,989,066	477,983
1936.....	3,216,712	75,351,000	605,000
1937.....	4,970,858	123,289,480	1,029,000

Quantity and value, according to destination in 1937

DESTINATION	QUANTITY		VALUE (milrêls)
	Cases	Kilos	
Argentina.....	1,154,403	46,132,058	28,012,547
Belgo-Luxemburg Union.....	279,015	11,050,732	6,968,713
Bermuda.....	1,699	65,962	42,475
Canada.....	93,113	2,516,530	2,252,825
Casablanca.....	950	36,100	23,750
Chile.....	1,800	72,000	43,600
Falkland Islands.....	432	16,636	8,640
Finland.....	6,258	242,204	156,450
France.....	260,923	10,337,780	6,523,075
Germany.....	163,150	6,386,081	4,078,750
Great Britain.....	2,538,547	98,198,782	63,453,801
Italy.....	400	15,200	10,000
Netherlands.....	375,599	15,395,374	9,350,629
Norway.....	14,724	567,012	368,100
Sweden.....	79,645	3,054,910	1,991,125
Trinidad.....	100	4,000	2,500
Uruguay.....	100	3,800	2,500
TOTALS.....	4,970,858	194,095,161	123,289,480

## EXPORTATION OF LEMONS

Quantity and value according to destination in 1937

DESTINATION	QUANTITY		VALUE	
	Cases	Kilos	In milrêls	Equivalent in pounds sterling
Belgo-Luxemburg Union.....	1,109	42,976	22,180	...
France.....	282	10,716	5,640	...
Great Britain.....	3,613	138,002	68,915	...
Netherlands.....	1,893	71,934	37,860	...
TOTALS.....	6,897	263,628	134,595	1,159

# EXPORTATION OF TANGERINES

Quantity and value, according to destination in 1937

DESTINATION	QUANTITY		VALUE	
	Cases	Kilos	In milrâis	Equivalent in pounds sterling
Argentina.....	3,320	126,160	73,040	...
Belgo-Luxemburg Union.....	6,448	245,024	141,856	...
France.....	100	3,800	2,200	...
Great Britain.....	14,859	550,699	326,898	...
Netherlands.....	6,351	241,338	139,722	...
TOTALS.....	31,078	1,167,021	683,716	5,848

# COCOA

THE cocoa tree is found in its native state in the Amazon region. It is grown in the States of Baía, Pará, Amazonas and Espírito Santo. Pará was the first State to start cocoa planting. It planted the first tree in 1677 and in 1836 the first sprout was taken to the State of Baía, where it gave origin to vast plantations.



After the Gold Coast, Brazil is the greatest producer of cocoa in the world, and, in our country, Baía is the State which grows the largest quantity, *i. e.*, 98 %. The Bahian cocoa zone comprehends a strip of 500 kilometers along the coast, the width varying up to the maximum of 150 kilometers. Almost all of the cocoa crop comes from a continuous area of 20,000 Km.<sup>2</sup>, which begins at Belmonte, in the South, and terminates at Santarem in the North of the State. This splendid planting began to develop in 1890, because of the great worldwide increase in the demand for cocoa, and thanks to the very fruitful soil in the South of the State, which created

for the cocoa tree conditions more appropriate to its growth than it had encountered in its native land: the Amazonian region.

The "Instituto do Cacau" (Cocoa Institute), has always done its best to aid and encourage cocoa planting, so as to increase the size and improve the quality of the crops, more and more all the time, thus increasing the demand for this product on the markets of the world, which is not so great as it ought to be. The Institute, which was created by the State Government, efficaciously interferes in all questions relating to cocoa; improving and standardizing the types, taking care of communications and transportation in the vast cocoa growing zone and helping the planters by granting them credit under the most advantageous conditions.

Cocoa occupies a place high up on Brazil's exportation list. After coffee and cotton, it is the major item on same. The U. S. market, which consumes more than 40 % of the world's cocoa supply for making chocolates, sweets, powder, butter and pharmaceutical products, has, of late years, given preference to Brazilian cocoa.

The total Brazilian production of cocoa in the last five years has been distributed as follows. according to the number of 60 kilo bags: 1933 — 1,667,900; 1934 — 1,798,700; 1935 — 2,118,600; 1936 — 2,111,280; 1937 — 1,981,670.

### PRODUCTION OF COCOA

#### b) — Quantity

GEOGRAPHICAL ZONES AND FEDERATED UNITS		QUANTITY (tons)		
		Average 1929/1933	1936	1937
North.....	{ Amazonas.....	9,216	21,000	25,000
	{ Pará.....	28,530	50,000	68,000
	{ TOTALS.....	37,746	71,000	93,000
North-East.....	{ Pernambuco.....	162	830	800
	{ TOTALS.....	162	830	800
East.....	{ Baía.....	1,331,808	2,011,150	1,862,470
	{ Espírito Santo.....	6,477	20,000	18,000
	{ TOTALS.....	1,338,285	2,031,150	1,880,470
South.....	{ Rio de Janeiro.....	1,330	3,200	2,000
	{ TOTALS.....	1,330	3,200	2,000
Central.....	{ Minas Gerais.....	2,826	5,100	5,400
	{ TOTALS.....	2,826	5,100	5,400
BRAZIL.....		1,380,349	2,111,280	1,981,670



## PRODUCTION OF COCOA

b) — Value

GEOGRAPHICAL ZONES AND FEDERATED UNITS		Value (contos of réis)		
		Average 1929/1933	1936	1937
North.....	Amazonas.....	527	1,008	1,350
	Pará.....	1,912	2,550	3,876
	TOTALS.....	2,439	3,558	5,226
North-East.....	Pernambuco.....	10	42	43
	TOTALS.....	10	42	43
East.....	Baía.....	95,099	120,669	111,748
	Espírito Santo.....	413	1,200	1,134
	TOTALS.....	95,512	121,869	112,882
South.....	Rio de Janeiro.....	81	186	120
	TOTALS.....	81	186	120
Central.....	Minas Gerais.....	186	352	373
	TOTALS.....	186	352	373
BRAZIL.....		98,228	126,007	118,644

Note — The 1937 data is subject to rectification.

## EXPORTATION OF COCOA

Quantity and value during the 1926-1937 period

YEARS	Quantity (kilos)	VALUE	
		In milrêls	Equivalent in pounds sterling
1926.....	63,310,278	103,644,368	2,948,844
1927.....	75,542,983	187,417,894	4,560,233
1928.....	72,394,621	148,966,495	3,856,126
1929.....	65,557,546	104,943,880	2,577,811
1930.....	66,852,216	91,687,664	2,039,622
1931.....	75,862,933	98,197,316	1,395,787
1932.....	97,512,575	113,851,281	1,655,812
1933.....	98,686,885	106,337,252	1,339,838
1934.....	101,570,000	129,935,000	1,337,000
1935.....	111,826,000	163,035,000	1,302,000
1936.....	121,720,000	258,015,000	2,077,000
1937.....	105,112,813	229,208,723	1,924,000

Quantity and value, according to destination in 1937

DESTINATION	Quantity (kilos)	Value (milrêls)
Algeria.....	3,000	9,216
Argentina.....	4,106,250	8,544,408
Australia.....	3,060	7,641
Belgo-Luxemburg Union.....	743,640	1,933,277
Canada.....	240,000	700,750
Casablanca.....	18,000	38,404
Chile.....	78,000	248,742
Colombia.....	253,028	561,360
Czecho-Slovakia.....	76,500	164,755
Danzig.....	42,060	107,908
Denmark.....	1,276,140	2,795,749
Egypt.....	4,800	8,000



## EXPORTATION OF COCOA

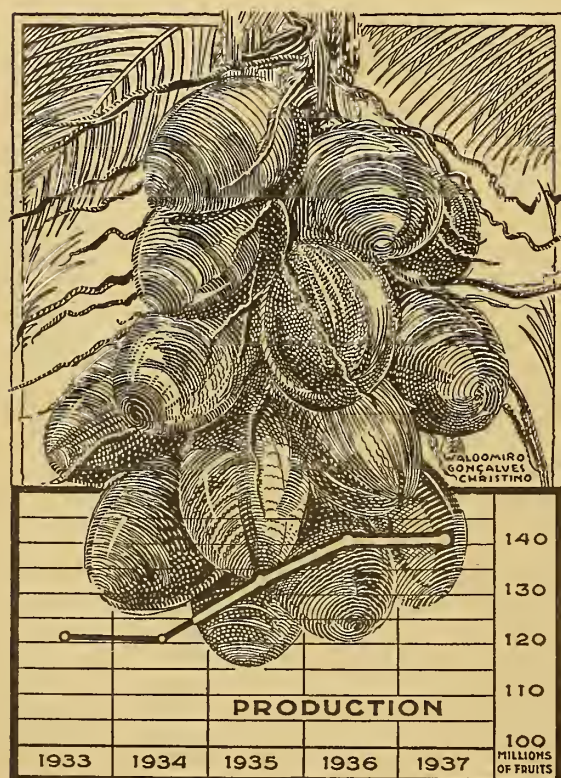
Quantity and value, according to destination in 1937

DESTINATION	Quantity (kilos)	Value (milréis)
France.....	680,955	1,784,407
Germany.....	2,542,140	5,417,336
Gibraltar.....	5,040	16,073
Great Britain.....	360,824	793,636
Italy.....	2,267,740	5,969,158
Japan.....	465,453	1,132,965
Jugoslavia.....	8,040	19,513
Latvia.....	119,940	253,767
Netherlands.....	3,517,360	8,284,784
Norway.....	638,580	1,477,947
Palestine.....	6,000	16,000
Poland.....	145,920	394,182
Sweden.....	1,558,080	3,527,226
Union of South Africa.....	89,220	253,492
United States.....	85,281,043	183,392,983
Uruguay.....	582,000	1,355,044
TOTALS.....	105,112,813	229,208,723

## THE COCONUT PALM

THE beach or coastal coconut palm, whose large ovate brown hard-shelled seed with edible white lining enclosing whitish liquid, denominated coconut milk, is popularly known throughout Brazil as “côco da Baía” (Bahia coconut), and is one of the economic natural products

of the North of the country, which will doubtless, in the near future, become a great source of revenue. The coconut palm grows in abundance all along the Brazilian coast, but reaches its highest point of development between the States of Maranhão and Rio de Janeiro. It is calculated that we have more than 3,000,000 coconut palms in Brazil. There is a great demand on the world's markets for products and by-products of the coconut in general and particularly coconut oil, coconut butter and coconut fiber. Coconut butter contains about 80 % of edible fat. Coconut oil is nowadays used on a very large scale indeed for making vegetable lard. It is also used in the manufacture of soap, candles, lubricants, etc.



## PRODUCTION OF COCONUTS

a) — Quantity

GEOGRAPHICAL ZONES AND FEDERATED UNITS		QUANTITY (fruits)		
		Average 1929/1933	1936	1937
North.....	Pará.....	132,000	180,000	185,000
	Maranhão.....	1,075,600	1,000,000	1,050,000
	Piauí.....	36,300	53,000	60,000
	TOTALS.....	1,243,900	1,233,000	1,295,000
North-East.....	Ceará.....	4,490,000	5,000,000	4,800,000
	Rio Grande do Norte.....	6,227,400	8,439,500	8,300,000
	Paraíba.....	11,099,820	5,900,000	5,789,000
	Pernambuco.....	24,878,500	25,889,300	23,400,000
	Alagoas.....	30,875,512	40,000,000	41,491,000
	TOTALS.....	77,571,232	85,228,800	83,780,000
East.....	Sergipe.....	12,040,400	13,800,000	14,000,000
	Baía.....	39,194,800	40,000,000	42,000,000
	Espírito Santo.....	78,600	125,000	130,000
	TOTALS.....	51,313,800	53,925,000	56,130,000
South.....	Rio de Janeiro.....	152,600	126,000	153,300
	TOTALS.....	152,600	126,000	153,300
BRAZIL.....		130,281,532	140,512,800	141,358,300

b) — Value

GEOGRAPHICAL ZONES AND FEDERATED UNITS		VALUE (contos of réis)		
		Average 1929/1933	1936	1937
North.....	Pará.....	24	45	46
	Maranhão.....	256	250	263
	Piauí.....	8	12	14
	TOTALS.....	288	307	323
North-East.....	Ceará.....	891	1,400	1,344
	Rio Grande do Norte.....	1,132	1,857	2,075
	Paraíba.....	2,160	1,298	1,447
	Pernambuco.....	4,307	5,178	5,148
	Alagoas.....	5,195	9,200	10,373
	TOTALS.....	13,685	18,933	20,387
East.....	Sergipe.....	1,908	2,464	2,800
	Baía.....	6,754	8,800	9,240
	Espírito Santo.....	16	31	33
	TOTALS.....	8,678	11,315	12,073
South.....	Rio de Janeiro.....	35	50	92
	TOTALS.....	35	50	92
BRAZIL.....		22,686	30,605	32,875

Note — The 1937 data is subject to rectification.



## COFFEE

## INTRODUCTORY

**P**ROSPECTS were very dark indeed for the future of Brazilian coffee exports at the end of 1937. The study of the situation of our exports, in comparison with those of other countries, gave us the painful certainty that very soon, if we continued along the same road, our competitors

would crush us, not by the volume of their production, although same was increasing, but because of Brazilian pertinacity in the adoption of an artificial method which innately impeded the coffee sales development policy.

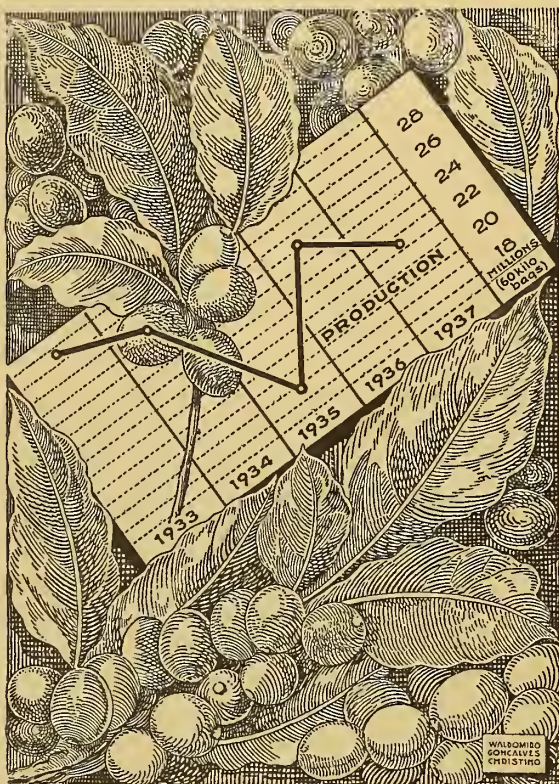
In February 1937 Brazil only exported 921,947 bags of coffee. On consulting the figures for the whole previous decade, it was verified that the country had never exported less. Therefore it was to be believed that the ever increasing drop in coffee exports, year by year, would make a profound impression on all those who, worrying about the fate of said product and that of the country, were interested in the economic prosperity of the Nation.

The Brazilian Government, therefore, was quite right when it made a 100 %

change in the framework of the system which it had ordered to be followed in regard to the economic and commercial policy of its principal product.

November 1937 thus marks the beginning of the Era of Brazilian Redemption. A breath of new life moved the whole country into action. Its economy was reorganized and encouraging openings were made in all the sectors of National activity.

The radical and beneficial change made in the coffee policy enabled us to act in a tenacious, aggressive and advantageous manner against our competitors, and the results obtained already authorize us to foresee our regaining in the near future the markets which belonged to us because they were created by us alone.



The painful, but unavoidable contingency of the coffee bonfires, in the economic drama of our "green gold", was followed by the airing of our stocks and the increasing of the possibilities of obtaining a crushing victory in the competition to win markets.

Facts speak louder than words. The drop in our coffee exports reached an absurd level in 1937. During the first nine months of said year, *i. e.*, from January to September, Brazil, only managed to attain the ridiculous total of... 8,572,365 bags. On verifying these statistics, one arrives at the conclusion that never before, at least not in the last ten years, had we known such low levels in our coffee exportation figures.

On said change being made in the economic and commercial guiding policy of our coffee, the recuperation of the lost volume of exports made itself felt in a vertiginous manner. The decrease percentage was transformed into an increase percentage. It is enough to say that we verified the fact that, during said period, in 1938, we had exported 12,882,556 bags of coffee, thus obtaining a favourable balance, in comparison with an identical period in 1937, of 4,310,191 bags, *i. e.*, 50 %.

However, faced by the facts, in order to appraise at its true value what Brazil has gained through the new courses traced for its coffee economy, it seems to us that the mere confrontation of the quantities exported during the first nine months before, and during the same space of time after, the inauguration of the new policy, will be sufficiently expressive and convincing.

Said confrontation places in front of our eyes figures showing 8,357,354 bags of coffee exported during the nine months previous to the putting into effect of the policy hereinbefore mentioned, and the shipment of 12,878,082 bags during an identical period immediately afterwards, consequently giving to same a favourable balance of 4,502,728 bags.

This eloquent, expressive balance dispenses any further comments whatsoever. It must be admitted and accepted as a fact that Brazil, through this ever increasing growth of its coffee exportation figures, regains its place as invincible leader, even if it does not manage to attain,— and this will be no matter of surprise for anybody,— incomparable, dominating supremacy in all the coffee consuming markets of the world.

*By Jayme Fernandes Guedes.*

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Coffee is still the chief product of Brazil, notwithstanding the remarkable increase noted in other National products. The 2,741,365,200 coffee trees spread over an area of approximately 3,539,231 hectares are ample proof of Brazil's productive capacity. The State of São Paulo represents the largest coffee production centre in Brazil, with a total of 1,482,183,300 plants, constituting 54 % of all the cultivated plants in the country. The statistics for the last 14 years show that coffee planting in Brazil has achieved an average annual progression of 9.7 %. The largest proportion of this development was noted in the State of Paraná with a percentage of 1,636. Also, in the States of Mato Grosso and Goiaz, modern plantations are being established, stimulated by a high average of production — characteristic of a new zone. In some States, such as Baía, Paraíba, Sergipe, and in certain regions of São Paulo, Minas Gerais and the State of Rio, coffee cultivation remains stationary or is on the decrease, in consequence of various climatic conditions or economic factors. The protection of the coffee industry has been one of the greatest aims of the Government, which is always



endeavouring to solve in a practical and rational way all the problems relating to it.

The Ministry of Agriculture is developing an intense campaign among the planters, with a view to improving the quality of the product, and, for this purpose, it has installed, in several sections of the country, "Experimental Stations", "Standardizing Factories", "Depulping", "Improvement", "Reimprovement", and "Climatic Chambers". The Governments of the various States have also co-operated in order that the planters may be properly protected, in view of the present world-wide competition, which becomes more and more intense. For this reason, the State of São Paulo, by Law N. 2,485, of December 16, 1935, put an end to the so-called "Emergency Act", which imposed a tax of 5\$000 on each bag of coffee exported. The State of Minas Gerais suppressed the 2\$000 tax per bag, and reduced the "ad valorem" export tax to 5 %. The State of Rio de Janeiro also reduced the tax on coffee exports from 6 % to 5 %, at the same time reducing the defence tax from 5\$000 to 1\$000. The National Coffee Department, likewise, working with a view to stimulating the volume for exportation, and understanding that one of the factors of this increase would be the production of first quality coffee, decided to offer money prizes to the coffee planters, independent of preferential liberation (Resolution N. 6,333, of March 19, 1936).

The position of Brazilian coffee has improved from year to year. On June 30, 1929, there were 8,921,000 bags of coffee in the interior of the country to be added to the 1929/30 crop, the total of which was 29,404,000 bags. It was as a result of this veritable avalanche of coffee, without possible disposal, that the Government started a series of precautionary measures for the defence of the product by methodically eliminating excess of crops—42,423,772 bags up to February 2, 1937 — thus making it possible to face the future of this valuable product with confidence and optimism.

The total Brazilian production of Coffee in the last five years has been distributed as follows, according to the quantity of 60 kilo bags: 1933-29,610,006; 1934-27,542,309; 1935-18,931,200; 1936-26,284,100; 1937-22,483,690.

#### PRODUCTION OF BRAZILIAN COFFEE

a) — Quantity

GEOGRAPHICAL ZONES AND FEDERATED UNITS		QUANTITY (60 kilo bags)		
		Average 1929/1933	1936	1937
North.....	Territory of Acre.....	4,777	2,500	2,000
	TOTALS.....	4,777	2,500	2,000
North-East.....	Ceará.....	69,380	50,000	45,000
	Paraíba.....	23,846	19,000	16,000
	Pernambuco.....	468,999	123,000	93,000
	Alagoas.....	22,526	20,000	32,890
	TOTALS.....	584,751	212,000	186,890
East.....	Sergipe.....	3,924	4,600	4,500
	Baía.....	352,092	452,000	281,000
	Espírito Santo.....	1,706,288	1,813,000	1,415,000
	TOTALS.....	2,062,304	2,269,600	1,700,500

## PRODUCTION OF BRAZILIAN COFFEE

a) — Quantity

GEOGRAPHICAL ZONES AND FEDERATED UNITS		QUANTITY (60 kilo bags)		
		Average 1929/1933	1936	1937
South.....	Rio de Janeiro.....	1,217,800	931,000	609,000
	São Paulo.....	17,629,035	17,505,000	15,687,000
	Paraná.....	522,927	547,000	1,066,000
	Santa Catarina.....	125,982	100,000	105,000
	TOTALS.....	19,495,744	19,083,000	17,467,000
Central.....	Mato Grosso.....	2,040	4,000	7,300
	Goiás.....	137,460	73,000	72,000
	Minas Gerais.....	3,795,343	4,640,000	3,048,000
	TOTALS.....	3,934,843	4,717,000	3,127,300
BRAZIL.....		26,082,419	26,284,100	22,483,690

b) — Value

GEOGRAPHICAL ZONES AND FEDERATED UNITS		VALUE (contos of réis)		
		Average 1929/1933	1936	1937
North.....	Territory of Acre.....	304	225	180
	TOTALS.....	304	225	180
North-East.....	Ceará.....	6,293	4,500	4,050
	Paraíba.....	2,463	1,539	1,296
	Pernambuco.....	36,829	9,594	7,533
	Alagoas.....	1,933	1,620	2,664
	TOTALS.....	47,518	17,253	15,543
East.....	Sergipe.....	311	359	356
	Bahia.....	31,518	36,612	22,761
	Espírito Santo.....	149,074	141,414	112,068
	TOTALS.....	180,903	178,385	135,185
South.....	Rio de Janeiro.....	106,087	62,563	38,793
	São Paulo.....	1,831,580	1,575,450	1,411,830
	Paraná.....	45,760	44,307	86,346
	Santa Catarina.....	10,446	8,100	8,505
	TOTALS.....	1,993,873	1,690,420	1,545,474
Central.....	Mato Grosso.....	144	360	659
	Goiás.....	11,068	5,256	5,616
	Minas Gerais.....	344,092	361,920	237,744
	TOTALS.....	355,304	367,536	244,019
BRAZIL.....		2,577,902	2,253,819	1,940,401

Note — The 1937 data is subject to rectification.

## WORLD PRODUCTION OF COFFEE DURING THE 1923-1938 PERIOD

Absolute figures and corresponding percentages

CROPS	THOUSANDS OF BAGS			% ON TOTAL	
	Brazil	Other countries	Total	Brazil	Other countries
1923/24.....	14,891	6,868	21,759	68.4%	31.6%
1924/25.....	14,586	6,762	21,348	68.3%	31.7%
1925/26.....	15,460	7,052	22,512	68.7%	31.3%
1926/27.....	15,848	7,068	22,916	69.2%	30.8%
1927/28.....	27,122	8,003	35,125	77.2%	22.8%
1928/29.....	13,621	8,660	22,281	61.1%	38.9%
1929/30.....	28,231	8,273	36,504	77.3%	22.7%
1930/31.....	16,552	8,633	25,185	65.7%	34.3%
1931/32.....	28,333	8,287	36,620	77.4%	22.6%
1932/33.....	16,500	9,239	25,739	64.1%	35.9%
1933/34.....	29,610	8,920	38,530	76.8%	23.2%
1934/35.....	17,366	7,699	25,065	69.3%	30.7%
1935/36.....	20,857	12,658	33,515	62.2%	37.8%
1936/37.....	26,103	10,766	36,869	67.2%	32.8%
1937/38.....	22,271	10,000	32,271	69.0%	31.0%

PRINCIPAL COFFEE PRODUCING COUNTRIES DURING  
THE 1910-1937 PERIOD

CROPS	QUANTITY (IN 60 KILO BAGS)						
	Brazil	Colombia	Ecuador	Peru	Venezuela	Costa Rica	Guatemala
1910/11.....	10,848,000	500,000	66,000	7,000	731,000	240,000	—
1911/12.....	13,037,000	450,000	77,000	12,000	738,000	211,000	—
1912/13.....	12,131,000	500,000	46,000	4,000	884,000	204,000	—
1913/14.....	14,466,000	600,000	61,000	9,000	1,074,000	217,000	703,000
1914/15.....	13,471,000	650,000	50,000	6,000	917,000	295,000	640,000
1915/16.....	15,960,000	750,000	39,000	10,000	1,043,000	203,000	610,000
1916/17.....	12,741,000	900,000	54,000	2,000	847,000	281,000	675,000
1917/18.....	15,836,000	1,000,000	44,000	1,000	735,000	204,000	665,000
1918/19.....	9,712,000	1,200,000	26,000	1,000	666,000	191,000	601,000
1919/20.....	7,500,000	1,500,000	28,000	3,000	1,359,000	233,000	688,000
1920/21.....	14,496,000	1,700,000	26,000	500	557,000	233,000	722,000
1921/22.....	12,862,000	2,345,000	103,000	500	992,000	222,000	643,000
1922/23.....	10,194,000	1,700,000	68,000	3,000	868,000	310,000	770,000
1923/24.....	14,891,000	1,800,000	93,000	500	774,000	185,000	735,000
1924/25.....	14,586,000	2,216,000	97,000	2,000	909,000	304,000	682,000
1925/26.....	15,460,000	1,918,000	69,000	5,000	894,000	256,000	744,000
1926/27.....	15,848,000	2,438,000	101,000	7,000	1,013,000	304,000	716,000
1927/28.....	27,122,000	2,529,000	98,000	11,000	851,000	269,000	879,000
1928/29.....	13,621,000	2,608,000	153,000	16,000	638,000	314,000	741,000
1929/30.....	28,231,000	3,060,000	122,000	13,000	1,073,000	328,000	736,000
1930/31.....	16,552,000	3,017,000	158,000	12,000	786,000	392,000	950,000
1931/32.....	28,333,000	3,015,000	139,000	35,000	934,000	384,000	605,000
1932/33.....	16,500,000	3,348,000	134,000	40,000	820,000	308,000	775,000
1933/34.....	29,610,000	3,464,000	117,000	31,000	569,000	463,000	575,000
1934/35.....	17,366,000	3,300,000	239,000	68,000	761,000	450,000	800,000
1935/36.....	20,857,000	3,824,000	160,000	35,000	850,000	350,000	615,000
1936/37.....	26,103,000	4,000,000	175,000	50,000	1,050,000	425,000	825,000

## EXPORTATION OF BRAZILIAN COFFEE

Quantity and value during the 1928-1937 period

(1928—29=100)

YEARS	Quantity (60 kilo bags)	VALUE		INDEXES			VALUE PER BAG ON BOARD				Percentage of Coffee on total Brazili- an exports
		In contos of réis	Equivalent In pounds sterling	Quan- tity	VALUE		In réis	In- pounds ster- ling	INDEXES		
					In contos of réis	In pounds ster- ling			In réis	In pounds ster- ling	
1928. ....	13,881,445	2,840,415	69,701,259	99	102	102	204,620	5/ 4	103	103	71.54
1929. ....	14,280,815	2,740,073	67,306,847	101	98	98	191,871	4/14	97	97	70.98
1930. ....	15,288,409	1,827,577	41,178,790	109	65	60	119,540	2/14	60	56	62.86
1931. ....	17,850,872	2,347,079	34,103,507	127	84	50	131,483	1/18	66	39	69.07
1932. ....	11,935,244	1,823,948	26,237,827	85	65	38	152,820	2/ 4	77	45	71.90
1933. ....	15,459,309	2,052,858	26,168,483	110	74	38	132,791	1/14	67	35	72.79
1934. ....	14,146,879	2,114,512	21,540,599	100	76	31	149,468	1/10	75	31	61.13
1935. ....	15,328,791	2,156,691	17,373,215	109	77	25	140,690	1/ 3	71	24	52.55
1936. ....	14,185,506	2,231,472	17,785,391	101	80	26	157,307	1/ 5	79	30	45.58
1937. ....	12,122,809	2,159,431	17,886,647	86	77	26	178,130	1/10	90	31	42.41

## Quantity and value by countries in 1937

DESTINATION	Quantity (60 kilo bags)	VALUE	
		In milrêls	Equivalent In pounds sterling
Africa			
Algelia.....	198,207	30,964,256	257,377
Canaries.....	2,400	423,280	3,451
Egypt.....	71,721	12,075,085	99,132
Lybia.....	5,113	941,987	8,163
Madeira.....	858	155,717	1,258
Morocco.....	3,986	589,399	4,892
Mozambique.....	6,195	1,005,500	8,351
Senegal.....	1,177	186,987	1,584
Southwest Africa.....	2,937	462,404	3,907
Tunis.....	18,997	3,042,027	25,003
Union of South Africa.....	92,230	14,478,742	120,774
Asia			
Côa.....	207	37,640	317
Cyprus.....	7,989	1,289,815	9,967
Japan.....	61,057	11,485,461	99,959
Lero.....	56	10,807	88
Palestine.....	8,955	1,404,109	11,059
Rhodes.....	2,105	380,233	3,249
Syria.....	6,649	1,123,602	9,036
Turkey.....	21,500	3,831,301	32,671
Europe			
Albania.....	6,345	1,034,453	8,505
Austria.....	2,250	424,592	3,191
Belgo-Luxemburg Union.....	237,522	43,967,033	363,147
Bulgaria.....	2,644	469,216	3,915
Czecho-Slovakia.....	51,845	9,382,071	77,675
Danzig.....	22,780	3,944,959	33,019
Denmark.....	143,705	25,319,564	208,727
Finland.....	224,966	36,619,204	297,732
France.....	1,254,362	206,281,151	1,696,815



## EXPORTATION OF BRAZILIAN COFFEE

Quantity and value by countries in 1937

DESTINATION	Quantity (60 kilo bags)	VALUE	
		In milrêis	Equivalent in pounds sterling
Germany.....	1,261,812	243,537,879	2,051,767
Gibraltar.....	8,724	1,603,388	13,430
Great Britain.....	1,155	217,987	1,635
Greece.....	85,845	14,376,070	119,538
Hungary.....	2,988	529,661	4,388
Iceland.....	6,183	1,030,944	8,669
Italy.....	252,640	45,946,277	379,117
Jugoslavia.....	44,082	7,244,849	58,909
Lithuania.....	65	11,433	99
Malta.....	3,385	386,041	2,688
Netherlands.....	291,407	54,214,220	444,849
Norway.....	40,834	7,473,926	61,156
Poland.....	27,614	4,693,180	39,319
Portugal.....	26,102	4,669,081	38,336
Roumania.....	18,691	3,239,322	27,523
Sweden.....	474,410	89,374,810	745,493
Switzerland.....	15,963	2,922,801	23,879
Turkey.....	81,079	14,231,887	120,386
North and Central America			
Canada.....	37,146	6,983,980	57,462
United States.....	6,590,088	1,180,843,291	9,756,484
South America			
Argentina.....	329,599	54,530,554	455,666
Bolivia.....	46	4,565	37
Chile.....	27,546	4,244,264	35,297
Colombia.....	22	4,267	37
Falkland Islands.....	20	3,340	28
French Guiana.....	50	6,760	56
Paraguay.....	660	114,217	986
Uruguay.....	35,895	5,661,586	46,449
TOTALS.....	12,122,809	2,159,431,155	17,886,647

PRINCIPAL BUYERS OF BRAZILIAN COFFEE DURING THE  
1929-1937 PERIOD

COUNTRIES	QUANTITY (60 kilo bags)					
	1929	1931	1933	1935	1936	1937
Algolia.....	196,227	208,498	208,460	219,172	236,958	198,646
Argentina.....	573,930	392,451	397,804	378,511	287,507	324,054
Belgo-Luxemburg Union.....	348,337	481,389	424,676	448,303	351,062	233,778
Canada.....	36,702	72,550	33,356	32,175	37,829	39,381
Chile.....	63,422	49,848	13,545	24,194	20,018	18,666
Denmark.....	184,884	288,047	194,961	168,761	190,981	143,204
Egypt.....	85,948	57,835	63,677	91,432	39,270	71,346
Finland.....	83,742	67,324	164,100	203,580	205,635	222,603
France.....	1,978,809	2,199,095	1,766,500	1,763,192	1,597,778	1,240,562
Germany.....	807,401	1,170,626	1,165,419	871,007	1,128,219	1,256,892
Greece.....	23,940	49,615	61,843	107,906	106,363	86,424
Italy.....	868,014	894,219	589,682	439,252	401,306	221,057
Jugoslavia.....	41,602	35,249	23,378	72,533	63,843	44,102
Netherlands.....	811,323	1,070,915	782,653	582,022	498,127	291,531
Norway.....	35,247	52,867	37,353	87,373	28,362	40,770
Portugal.....	24,073	35,816	35,052	35,996	37,335	24,102
Spain.....	148,540	185,286	48,191	70,407	55,370	—
Sweden.....	428,299	542,542	508,621	489,868	412,319	473,297
United States.....	7,114,185	9,537,627	8,352,592	8,684,327	8,021,738	6,577,640
Union of South Africa.....	174,728	192,381	153,690	138,793	107,833	91,905
Uruguay.....	67,804	39,747	61,302	28,147	29,139	35,895

**BRAZILIAN COFFEE EXPORTATION AS COMPARED WITH OTHER  
VEGETABLE EXPORTS — 1909-1937**

YEARS	VALUE IN 1,000 CONTOS OF RÉIS				
	Total including coffee	% of class on total exports	% of coffee on total exports	Total excluding coffee	% of coffee on the total of the class
1909.....	950.0	93.5	52.5	416.1	56.2
1910.....	833.4	94.0	41.0	497.9	43.6
1911.....	1,059.7	95.0	54.4	453.2	57.2
1912.....	1,059.7	94.0	62.4	361.3	65.9
1913.....	913.0	93.0	62.3	301.3	67.0
1914.....	696.7	92.8	58.5	257.0	63.1
1915.....	918.4	88.1	59.5	297.9	67.6
1916.....	940.1	82.7	51.3	350.9	62.7
1917.....	899.8	75.5	36.9	459.5	48.9
1918.....	851.7	74.9	31.0	499.0	41.4
1919.....	1,812.3	83.1	56.3	585.8	67.7
1920.....	1,466.2	83.7	49.1	605.2	58.7
1921.....	1,490.9	87.2	59.6	471.8	68.4
1922.....	2,113.9	90.6	64.5	609.7	71.1
1923.....	2,908.1	88.2	64.4	783.5	73.1
1924.....	3,546.2	91.8	85.8	617.6	82.6
1925.....	3,702.7	92.1	72.1	802.6	78.3
1926.....	2,960.2	92.8	73.6	612.6	79.3
1927.....	3,321.8	91.1	70.7	746.2	77.5
1928.....	3,486.4	87.8	71.5	646.2	81.5
1929.....	3,462.4	89.7	71.0	722.3	79.1
1930.....	2,452.2	84.3	62.9	624.6	74.5
1931.....	2,986.0	87.9	69.9	638.9	78.6
1932.....	2,999.0	90.6	71.9	475.1	79.3
1933.....	2,559.7	90.8	72.7	509.6	80.1
1934.....	3,198.3	92.5	60.8	1,103.8	65.7
1935.....	3,710.9	90.4	52.5	1,584.3	58.1
1936.....	4,395.1	89.8	45.4	2,165.6	49.2
1937.....	4,443.2	87.3	42.4	2,283.8	48.6

**STOCK OF COFFEE IN BRAZIL  
(1928=100)**

YEARS	ON JUNE 30	
	In 1,000 bags	Index numbers
1928.....	13,109	100
1929.....	10,322	78
1930.....	23,691	180
1931.....	19,313	147
1932.....	21,342	162
1933.....	18,585	141
1934.....	18,615	142
1935.....	17,134	130
1936.....	20,716	158
1937.....	22,566	172

## WORLD CONSUMPTION OF COFFEE

Absolute figures and corresponding percentages during  
the 1923-1938 period

CROPS	THOUSANDS OF BAGS			% ON TOTAL	
	Brazil	Other countries	Total	Brazil	Other countries
1923/24.....	15,322	6,714	22,036	69.5%	30.5%
1924/25.....	13,682	6,824	20,506	66.7%	33.3%
1925/26.....	14,555	7,140	21,705	67.1%	32.9%
1926/27.....	14,276	7,022	21,298	67.0%	33.0%
1927/28.....	15,766	7,770	23,536	67.0%	33.0%
1928/29.....	13,890	8,361	22,251	62.4%	37.6%
1929/30.....	15,232	8,322	23,554	64.7%	35.3%
1930/31.....	16,546	8,545	25,091	65.9%	34.1%
1931/32.....	15,589	8,134	23,723	65.7%	34.3%
1932/33.....	13,356	9,492	22,848	58.5%	41.5%
1933/34.....	16,062	8,389	24,451	65.7%	34.3%
1934/35.....	14,859	7,822	22,681	65.5%	34.5%
1935/36.....	16,128	9,717	25,845	62.4%	37.6%
1936/37.....	14,010	10,996	25,006	56.0%	44.0%
1937/38.....	14,797	10,822	25,619	57.8%	42.2%

## Importation by countries and consumption "per capita" in 1937

COUNTRIES	Importation (60 kilo bags)	Consumption "per capita" (in kilos)
<b>Africa</b>		
Algeria.....	209,400	1.821
Egypt.....	117,900	0.465
Tunis.....	22,366	0.537
Union of South Africa.....	224,150	1.601
<b>Asia</b>		
Ceylon.....	24,516	0.265
Japan.....	142,697	0.075
Syria and Libania.....	19,400	0.364
<b>Europe</b>		
Austria.....	86,697	0.773
Belgo-Luxemburg Union.....	852,033	6.198
Bulgaria.....	9,517	0.092
Czecho-Slovakia.....	188,066	0.752
Denmark.....	486,101	7.882
Estonia.....	1,683	0.090
Finland.....	361,383	6.167
France.....	3,091,701	4.451
Germany.....	2,962,945	2.685
Great Britain — Northern Ireland.....	316,576	0.046
Greece.....	107,066	0.970
Hungary.....	32,650	0.223
Ireland (Eire).....	4,133	0.083
Italy.....	564,802	0.803
Jugoslavia.....	110,366	0.457
Latvia.....	2,583	0.080
Lithuania.....	2,716	0.065
Netherlands.....	640,965	4.634
Norway.....	377,256	7.805
Poland.....	93,047	0.172
Portugal.....	93,318	0.931
Spain.....	—	—
Sweden.....	797,916	7.707
Switzerland.....	224,617	3.770
Turkey.....	102,000	0.370
<b>North and Central America</b>		
Canada.....	283,998	1.705
United States.....	12,829,938	5.933
<b>South America</b>		
Argentina.....	384,877	1.367
Chile.....	61,898	0.791
Uruguay.....	20,977	0.629

## WORLD CONSUMPTION OF COFFEE

Importation by countries and consumption "per capita" in 1937

COUNTRIES	Importation (60 kilo bags)	Consumption "per capita" (in kilos)
Oceania		
Australia.....	31,166	0.279
New Zealand.....	3,050	0.118
TOTALS.....	25,886,470	2.427

Note — Data compiled by the International Institute of Agriculture — Rome.

## MOVEMENT OF COFFEE IN THE UNITED STATES

Importation, exportation, consumption "per capita" and average price during the 1886-1937 period

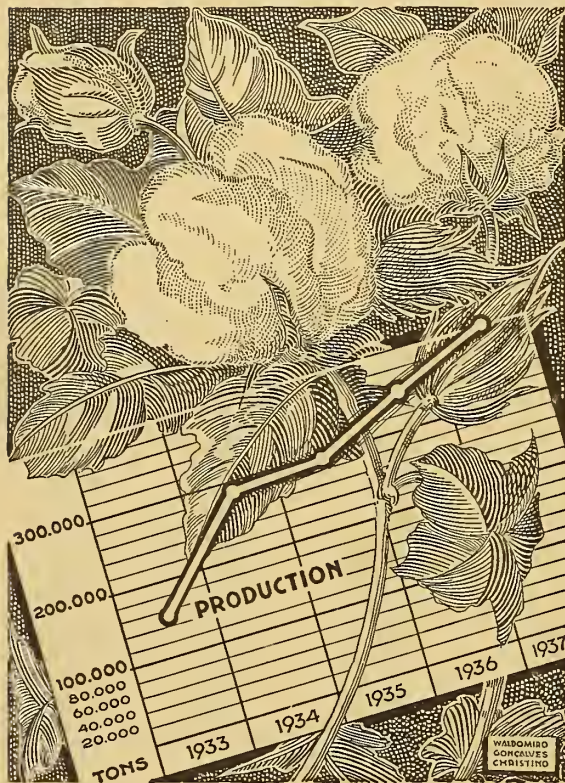
YEARS	Importation (60 kilo bage)	Exportation (60 kilo bage)	Consumption "per capita" (in kilos)	Average price cents per pound = 454 gram
1886.....	4,278,091	208,303	4,303	7.60
1887.....	3,985,674	191,591	3,840	10.70
1888.....	3,209,440	114,265	3,060	14.00
1889.....	4,381,796	130,795	4,120	13.00
1890.....	3,781,508	68,159	3,530	16.00
1891.....	3,935,818	64,295	3,600	19.00
1892.....	4,850,084	79,841	4,350	20.00
1893.....	4,268,705	91,470	3,740	14.00
1894.....	4,173,743	29,280	3,640	16.40
1895.....	4,940,977	67,985	4,190	14.70
1896.....	4,398,470	60,045	3,670	16.60
1897.....	5,588,227	99,136	4,560	11.10
1898.....	6,594,803	142,598	5,260	7.50
1899.....	6,301,720	227,803	4,780	6.50
1900.....	5,969,637	296,902	4,470	6.70
1901.....	6,492,561	347,235	4,740	6.40
1902.....	8,275,333	266,099	6,050	6.40
1903.....	6,994,349	370,068	4,900	6.60
1904.....	7,565,835	265,924	5,300	7.00
1905.....	7,924,455	280,962	5,440	8.10
1906.....	6,468,182	144,947	4,410	8.60
1907.....	7,474,212	88,083	5,060	7.90
1908.....	6,758,273	129,659	4,460	7.60
1909.....	7,967,803	115,061	5,190	7.50
1910.....	6,621,091	102,795	4,240	7.90
1911.....	6,653,955	63,417	4,220	10.30
1912.....	6,725,364	54,515	4,200	13.30
1913.....	6,561,015	54,055	4,040	13.80
1914.....	7,623,955	104,629	4,600	11.10
1915.....	8,530,621	537,523	4,820	9.60
1916.....	9,120,008	574,379	5,080	9.60
1917.....	10,015,599	435,629	5,620	10.10
1918.....	8,681,485	496,955	4,740	9.00
1919.....	10,161,409	704,705	5,400	19.50
1920.....	9,846,538	415,500	5,300	19.50
1921.....	10,192,174	316,826	5,470	20.70
1922.....	9,461,652	269,515	5,010	12.90
1923.....	10,698,735	241,659	5,659	13.50
1924.....	10,786,046	297,068	5,550	17.50
1925.....	9,754,553	210,856	4,980	22.30
1926.....	11,329,674	201,635	5,720	21.60
1927.....	10,940,333	174,462	5,460	18.50
1928.....	11,067,121	146,348	5,460	21.30
1929.....	11,249,393	128,773	5,490	20.40
1930.....	12,156,826	258,621	5,790	13.10
1931.....	13,251,197	150,598	6,330	10.10
1932.....	11,372,168	174,871	5,398	9.10
1933.....	12,017,077	101,454	5,735	7.80
1934.....	11,523,618	74,125	5,538	8.70
1935.....	13,273,998	110,973	6,380	9.25
1936.....	13,176,489	106,128	6,269	8.70
1937.....	12,856,763	113,760	6,117	7.80

Note — Up to 1918, year ending June 30. — The figures in this table were taken from the "Statistical Abstract of the United States".



## COTTON

**I**N 1930 new instructions were given for cotton planting in Brazil and, owing to the fact that same were faithfully carried out, the crops have been better every year since then.



The Federal Government has paid special attention to the matter of fields of co-operation with the planters, especially in the North of the country.

Experimental work, for the purpose of improving the varieties of cotton, has been speeded up, with the help of the Experimental Stations installed in the States of Rio Grande do Norte, Paraíba, Pernambuco, Alagoas, Sergipe and Minas Gerais.

The Ministry of Agriculture, besides equipping its specialized service with Experimental Seed-fields, Classification Commissions and Fibre Technology Laboratories, had magnificent cotton improving plants established in the States of Pará, Piauí, Alagoas and Baía, granting, for this purpose, financial aid to the respective State Governments.

As a result of this cotton development policy, the crops increased in volume and bettered in quality, there also having been noted a considerable difference in the size of the fibres. In short, the cleanest types were more outstanding in the percentage tables, while the inferior types appeared on a smaller scale.

The percentage of long-fibre cotton production, in the North-East of the country, which, in 1932 was only 7,433, ascended to 10,681 in the following years.

The regulation of the classification of the product, was found worthy of special care on the part of the Government, which, in this respect, took steps compatible with the needs of commerce.

Various measures for the repression of fraud having been taken, with the necessary severity, laws were issued to abolish the prerogatives of certain private associations which had been carrying out cotton inspection services. With this end in view, the Commissions entrusted with said task, in the different cotton producing States, were changed into Federal Commissions, thus satis-

fying an old aspiration of the cotton exporters. Besides this, new Classification Stations were installed in the interior of Brazil, at suitable points in the principal cotton growing zones.

The distribution of cotton-plant seeds is one of the duties of the Textile Plants Service.

In 1937, 5,137,435 kilos of seeds of the following varieties were distributed: Texas, Herbaceo, Express, H. 105, Mocó, Verdão Piratininga, Creolo, Serigi, Delfos, Day's, Rim de Boi, Quebradinho, Pitaguarí, Delta, Russel, Cleveland and Meade.

The Statistical and Information Bulletin of above mentioned Service is being regularly published and distributed to a large number of people interested in the cotton business, as well as to Embassies, Legations, Consulates and Commercial Secretaries in Brazil and abroad.

In the Northern zone, including the North-East and the East, according to the second and third estimates made, the 1937-38 crop may be appraised at 171,500,000 kilos, these figures, however, are liable to rectification because the part relating to the State of Maranhão has not yet been confirmed.

In the South (which zone includes the Central one), the first and second estimates were made, the crops being appraised at 306,500,000 and 303,600,000 kilos respectively.

It is rather interesting to stress the ever increasing importance that cotton is acquiring in Brazilian economy.

Up to 1933 it represented but a minute part of our trade balance, its value appearing, in pounds sterling for the total of our general exportation, with the following percentage: 1,03 %.

In 1937, however, this outstanding National product, had already attained the following percentage,—quite a considerable one: 1,85 %.

# PRODUCTION OF RAW COTTON

a) — Quantity

GEOGRAPHICAL ZONES AND FEDERATED UNITS		QUANTITY (tons)		
		Average 1929/1933	1936	1937
North.....	Pará.....	2,275	2,250	2,400
	Maranhão.....	10,679	7,911	7,963
	Piauí.....	1,720	4,558	4,259
	TOTALS.....	14,674	14,719	14,622
North-East.....	Ceará.....	12,400	24,800	32,500
	Rio Grande do Norte.....	13,142	13,757	22,526
	Paraíba.....	20,107	35,414	37,999
	Pernambuco.....	14,800	27,393	27,879
	Alagoas.....	6,657	13,252	11,281
	TOTALS.....	37,106	119,616	132,185
East.....	Sergipe.....	4,193	5,647	5,875
	Baía.....	3,420	7,700	7,739
	Espírito Santo.....	4	—	—
	TOTALS.....	7,617	13,347	13,614
South.....	Rio de Janeiro.....	1,225	485	2,545
	São Paulo.....	14,861	173,500	202,618
	Paraná.....	80	4,000	4,000
	TOTALS.....	16,166	182,985	209,163
Central.....	Mato Grosso.....	—	450	279
	Goiás.....	30	330	700
	Minas Gerais.....	6,020	20,096	35,000
	TOTALS.....	6,050	20,876	35,979
Sundry plantations.....		544	—	—
BRAZIL.....		112,157	351,543	405,563

## PRODUCTION OF RAW COTTON

b) — Value

GEOGRAPHICAL ZONES AND FEDERATED UNITS		VALUE (contos of réis)		
		Average 1929/1933	1936	1937
North.....	Pará.....	5,370	5,850	6,720
	Maranhão.....	24,689	20,569	20,704
	Piauí.....	4,349	11,623	11,073
	TOTALS.....	34,408	38,042	38,497
North-East.....	Ceará.....	28,210	74,400	97,500
	Rio Grande do Norte.....	32,342	65,650	78,841
	Paraíba.....	51,218	106,242	113,997
	Pernambuco.....	40,730	82,179	83,637
	Alagoas.....	16,773	37,106	33,843
	TOTALS.....	169,273	365,577	407,818
East.....	Sergipe.....	9,449	14,118	14,688
	Baía.....	8,450	19,250	19,348
	Espírito Santo.....	12	—	—
	TOTALS.....	17,911	33,368	34,036
South.....	Rio de Janeiro.....	3,271	1,940	10,522
	São Paulo.....	44,542	660,450	749,687
	Paraná.....	232	13,200	13,200
	TOTALS.....	48,045	675,590	773,409
Central.....	Mato Grosso.....	—	1,350	851
	Goiás.....	60	990	2,100
	Minas Gerais.....	15,940	70,336	122,500
	TOTALS.....	16,000	72,676	125,451
Sundry plantations.....		1,496	—	—
BRAZIL.....		287,133	1,185,253	1,379,211

Note — The 1937 data is subject to rectification.

## PRODUCTION OF COTTON SEED

a) — Quantity

GEOGRAPHICAL ZONES AND FEDERATED UNITS		QUANTITY (tons)		
		Average 1929/1933	1936	1937
North.....	Pará.....	5,308	5,250	5,600
	Maranhão.....	24,918	18,459	18,580
	Piauí.....	4,012	10,635	9,938
	TOTALS.....	34,238	34,344	34,118



## PRODUCTION OF COTTON SEED

a) — Quantity

GEOGRAPHICAL ZONES AND FEDERATED UNITS		QUANTITY (tons)		
		Average 1929/1933	1938	1937
North - East.....	Ceará.....	28,932	57,870	75,833
	Rio Grande do Norte.....	30,664	43,766	52,561
	Paraíba.....	46,916	82,633	88,664
	Pernambuco.....	34,533	63,917	65,051
	Alagoas.....	15,532	30,921	26,322
	TOTALS.....	156,578	279,107	308,431
East.....	Sergipe.....	9,783	13,176	13,708
	Baía.....	7,980	17,967	18,057
	Espírito Santo.....	9	—	—
	TOTALS.....	17,772	31,143	31,765
South.....	Rio de Janeiro.....	2,860	1,130	5,940
	São Paulo.....	34,207	416,500	472,776
	Paraná.....	187	9,333	9,333
	TOTALS.....	37,254	426,963	488,049
Central.....	Mato Grosso.....	—	1,050	651
	Goiás.....	70	770	1,633
	Minas Gerais.....	14,046	46,891	81,667
	TOTALS.....	14,116	48,711	83,951
Sundry plantations.....		1,269	—	—
BRAZIL.....		261,227	820,268	946,314

b) — Value

GEOGRAPHICAL ZONES AND FEDERATED UNITS		VALUE (contos of réis)		
		Average 1929/1933	1936	1937
North.....	Pará.....	1,762	1,628	1,736
	Maranhão.....	7,693	4,799	4,331
	Piauí.....	1,315	3,191	2,981
	TOTALS.....	10,770	9,618	9,548
North - East.....	Ceará.....	8,972	19,097	25,025
	Rio Grande do Norte.....	10,249	13,567	16,294
	Paraíba.....	15,849	28,922	31,032
	Pernambuco.....	12,194	21,093	21,467
	Alagoas.....	5,046	10,204	8,686
	TOTALS.....	52,310	92,883	102,504
East.....	Sergipe.....	3,017	4,085	4,249
	Baía.....	2,577	5,570	5,598
	Espírito Santo.....	2	—	—
	TOTALS.....	5,596	9,655	9,847



## PRODUCTION OF COTTON SEED

b) — Value

GEOGRAPHICAL ZONES AND FEDERATED UNITS		VALUE (contos of réis)		
		Average 1929/1933	1933	1937
South.....	Rio de Janeiro.....	865	373	1,960
	São Paulo.....	12,559	145,775	165,472
	Paraná.....	67	3,267	3,267
	TOTALS.....	13,491	149,415	170,699
Central.....	Mato Grosso.....	—	315	202
	Goiaz.....	14	231	490
	Minas Gerais.....	4,666	15,005	26,133
	TOTALS.....	4,680	15,551	26,825
Sundry plantations.....		431	—	—
BRAZIL.....		87,278	277,122	319,423

Note — The 1937 data is subject to rectification.

## EXPORTATION OF COTTON

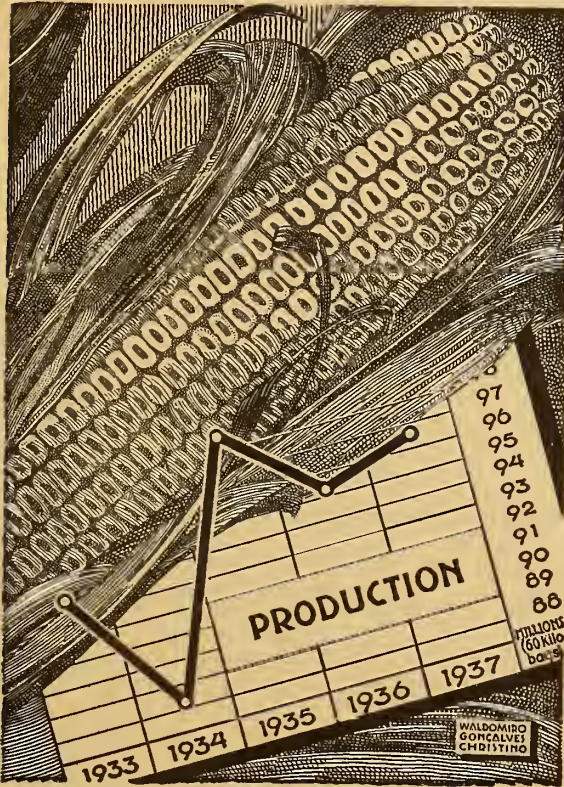
Quantity and value, according to destination in 1937

DESTINATION	QUANTITY (kilo)	VALUE	
		In mlrle	Equivalent In pounds sterling
Argentina.....	414,270	1,373,628	...
Austria.....	46,868	194,415	...
Belgo-Luxemburg Union.....	6,116,622	25,668,008	...
British India.....	215,196	1,040,608	...
China.....	4,134,337	17,441,308	...
Czecho-Slovakia.....	201,086	862,282	...
Denmark.....	26,542	104,633	...
Estonia.....	137,014	616,712	...
Finland.....	304,563	1,271,168	...
France.....	12,709,458	48,419,902	...
Germany.....	84,745,961	316,420,894	...
Great Britain.....	47,329,767	186,431,750	...
Indo-China.....	236,706	1,110,747	...
Italy.....	7,986,821	35,076,078	...
Japan.....	50,918,047	222,761,252	...
Latvia.....	76,005	227,538	...
Mandchuria.....	44,281	153,890	...
Netherlands.....	4,919,744	19,888,792	...
Norway.....	56,512	232,569	...
Poland.....	4,819,259	20,644,439	...
Portugal.....	7,320,582	28,532,819	...
Roumania.....	11,510	47,215	...
Sweden.....	1,265,711	5,209,828	...
Switzerland.....	25,738	120,835	...
United States.....	2,118,777	10,511,375	...
TOTALS.....	236,181,377	944,362,685	8,018,000

# MAIZE

**M**AIZE, which is also known as Indian corn, is a cereal occupying an outstanding place in the alimentation of human beings and cattle in many countries of the world. In the U. S. A., Argentina, Brazil and in several other countries — it is considered to be Cereal N.º 1. On the

complete list of Brazilian farming products, maize occupied, up to short time ago, the second place, representing 17% of the country's total agricultural produce, its value being appraised at one million contos of réis. As regards quantity, it is the first product appearing on the list with more than 90,000,000 bags. More than 1,500,000 hectares of land are annually utilized for maize growing, and Brazilian soil is so fruitful that it produces more than 5,000,000 tons of this wholesome cereal per annum. Although such a lot of maize is grown in Brazil, its exportation attains no high figures and we have sometimes even imported same. The reason for this state of affairs is that the home markets use up all that the country produces. We therefore have an excellent reason to increase maize growing to an enormous extent, thus becoming



one of the principal exporters of this product in the world.

In order to facilitate and develop maize exportation to foreign markets, the Government has decreed various measures relating to its classification and standardization.

## PRODUCTION OF MAIZE

a) — Quantity

GEOGRAPHICAL ZONES AND FEDERATED UNITS		QUANTITY (60 kilo bags)		
		Average 1929/1933	1936	1937
North.....	Territory of Acre.....	125,600	135,000	125,000
	Amazonas.....	46,405	35,000	40,000
	Pará.....	96,418	100,000	105,000
	Maranhão.....	223,016	80,000	85,000
	Piauí.....	142,976	164,600	170,000
TOTALS.....		634,415	514,600	525,000

## PRODUCTION OF MAIZE

a) — Quantity

GEOGRAPHICAL ZONES AND FEDERATED UNITS		QUANTITY (60 kilo bags)		
		Average 1929/1933	1936	1937
North - East.....	Ceará.....	728,917	850,000	845,000
	Rio Grande do Norte.....	97,170	47,710	45,000
	Paraíba.....	220,709	550,000	624,750
	Pernambuco.....	2,478,853	2,833,300	2,742,000
	Alagoas.....	719,077	458,060	432,400
	TOTALS.....	4,244,726	4,739,070	4,689,150
East.....	Sergipe.....	478,886	1,350,000	1,400,000
	Baía.....	715,166	700,000	750,000
	Espírito Santo.....	939,796	2,500,000	2,800,000
	TOTALS.....	2,133,848	4,550,000	4,950,000
South.....	Rio de Janeiro.....	5,972,913	5,259,600	5,320,750
	São Paulo.....	21,317,930	19,351,100	20,000,000
	Paraná.....	5,537,695	5,000,000	5,200,000
	Santa Catarina.....	2,750,633	2,800,000	2,672,000
	Rio Grande do Sul.....	20,926,442	21,963,700	23,000,000
	TOTALS.....	56,505,613	54,374,400	56,192,750
Central.....	Mato Grosso.....	154,316	320,000	373,690
	Goiás.....	3,619,712	3,200,000	3,500,000
	Minas Gerais.....	20,790,600	27,655,300	26,400,000
	TOTALS.....	24,564,630	31,175,300	30,273,690
BRAZIL.....		88,083,232	95,353,370	96,630,590

b) — Value

GEOGRAPHICAL ZONES AND FEDERATED UNITS		VALUE (contos of réis)		
		Average 1929/1933	1936	1937
North.....	Territory of Acre.....	1,145	1,458	1,500
	Amazonas.....	435	420	504
	Pará.....	1,016	1,200	1,269
	Maranhão.....	2,144	960	1,020
	Piauí.....	1,323	1,481	1,734
	TOTALS.....	6,063	5,519	6,018
North - East.....	Ceará.....	5,830	10,200	11,154
	Rio Grande do Norte.....	1,038	716	729
	Paraíba.....	2,726	6,600	8,247
	Pernambuco.....	32,041	34,000	32,904
	Alagoas.....	6,303	5,497	5,189
	TOTALS.....	47,938	57,013	58,223



## PRODUCTION OF MAIZE

a) — Value

GEOGRAPHICAL ZONES AND FEDERATED UNITS		VALUE (contos of réis)		
		Average 1929/1933	1936	1937
East.....	Sergipe.....	4,211	14,580	16,800
	Baia.....	7,406	8,400	9,000
	Espírito Santo.....	10,775	33,000	36,960
	TOTALS.....	22,392	55,980	62,760
South.....	Rio de Janeiro.....	68,264	75,738	87,792
	São Paulo.....	238,143	232,213	276,000
	Paraná.....	65,217	63,000	68,640
	Santa Catarina.....	28,652	30,240	32,064
	Rio Grande do Sul.....	239,971	263,564	414,000
	TOTALS.....	640,247	664,755	878,496
Central.....	Mato Grosso.....	1,391	3,840	5,131
	Goiaz.....	32,558	38,400	42,000
	Minas Gerais.....	225,487	308,786	316,800
	TOTALS.....	259,436	351,026	363,931
BRAZIL.....		976,076	1,134,293	1,369,428

Note — The 1937 data is subject to rectification.

## EXPORTATION OF MAIZE

Quantity and value during the 1925-1937 period

YEARS	Quantity (kilos)	VALUE	
		In millrê	Equivalent in pounds sterling
1925.....	2,271,877	664,063	15,207
1926.....	61,923	17,467	507
1927.....	299,610	91,390	2,219
1928.....	1,575,011	446,481	10,958
1929.....	21,567,223	5,875,765	144,408
1930.....	4,713,463	1,270,944	28,833
1931.....	311,820	77,544	1,190
1932.....	22,640	6,290	93
1933.....	31,710	8,848	111
1934.....	59,897,403	16,336,864	170,391
1935.....	27,593,000	7,588,000	69,000
1936.....	4,020,440	1,382,898	11,153
1937.....	15,010,841	5,768,861	42,614

Quantity and value according to destination in 1937

DESTINATION	Quantity (kilos)	Value (millrê)
Belgo-Luxemburg Union.....	5,810,680	2,351,715
Bolivia.....	28,010	12,510
Colombia.....	10,340	5,836
Germany.....	320,040	106,700
Great Britain.....	4,566,860	1,601,033
Netherlands.....	3,719,911	1,446,873
United States.....	555,000	244,194
TOTALS.....	15,010,841	5,768,861



## MAMONA

**M**AMONA is the Brazilian name for the yellow-pulpy fruit of the castor oil plant or Palma Christi, *Ricinus communis*, family Euphorbiaceae. The plant is cultivated in Brazil mainly because of the seeds, which are very rich in oil of excellent quality, more than 66% of their contents. Mamona is really of great economic value for its varied uses. There is no better lubricant for the engines of flying vessels. Air and sea planes fly very high and therefore encounter very cold regions and mamona oil is an admirable lubricant for the ships' engines, because it does not congeal. Just this special use of the product—and there are very many other purposes for which same is extensively employed,—have caused the cultivation of the mamona plant to be greatly developed. Owing to the extreme simplicity of the process employed, the mamona planting figures have increased at an extraordinary rate of late years in Brazil, principally in the States of Pará, Baía, Minas Gerais and São Paulo. Nowadays there are planters whose "mamoneira" groves occupy areas of hundreds of alquiers in extent. The Vegetable Production Encouragement Service of the Ministry of Agriculture, besides the propaganda it has carried out by means of various publications, and the practical instruction it has given to thousands of planters, has made interesting studies relating to the identification, fixation and selection of the different varieties of mamona. No less than twenty five varieties and sub-varieties have already been studied from the triple botanical, agricultural and industrial aspects.

Mamona is classified in the 8th place, pursuant to the order of its importance, on our exportation list.

## PRODUCTION OF MAMONA

a) — Quantity

GEOGRAPHICAL ZONES AND FEDERATED UNITS		QUANTITY (kilos)		
		1935	1936	1937
North.....	Pará.....	38,000	40,000	41,000
	Maranhão.....	611,500	1,018,000	1,300,000
	Piauí.....	1,039,000	967,800	980,000
	TOTALS.....	1,688,500	2,025,800	2,321,000
North - East.....	Ceará.....	30,000,000	33,000,000	38,000,000
	Rio Grande do Norte.....	17,800	29,800	35,000
	Paraíba.....	455,000	837,400	850,000
	Pernambuco.....	15,567,000	17,000,000	27,787,000
	Alagoas.....	2,246,000	2,723,600	4,407,000
	TOTALS.....	48,285,800	53,590,800	71,079,000
East.....	Sergipe.....	1,000,000	1,500,000	1,600,000
	Baía.....	26,000,000	50,000,000	50,800,000
	Espírito Santo.....	48,000	50,000	50,000
	TOTALS.....	27,048,000	51,550,000	52,450,000
South.....	Rio de Janeiro.....	976,000	853,500	1,466,800
	São Paulo.....	10,000,000	18,000,000	18,500,000
	Paraná.....	450,000	688,600	751,000
	Santa Catarina.....	15,000	18,000	22,000
	Rio Grande do Sul.....	570,000	657,300	650,000
	TOTALS.....	12,011,000	20,217,400	21,389,800
Central.....	Mato Grosso.....	8,000	10,000	123,000
	Goiás.....	45,000	50,000	50,000
	Minas Gerais.....	15,000,000	27,247,900	20,000,000
	TOTALS.....	15,053,000	27,307,900	20,173,000
BRAZIL.....		104,086,300	154,691,900	167,412,800

## PRODUCTION OF MAMONA

b) — Value

GEOGRAPHICAL ZONES AND FEDERATED UNITS		VALUE (contos of réis)		
		1935	1936	1937
North.....	Pará.....	16	24	25
	Maranhão.....	245	611	780
	Piauí.....	416	508	510
	TOTALS.....	677	1,138	1,315
North - East.....	Ceará.....	12,600	17,160	19,760
	Rio Grande do Norte.....	8	15	18
	Paraíba.....	200	427	442
	Pernambuco.....	7,316	8,670	14,171
	Alagoas.....	876	1,389	2,248
	TOTALS.....	21,000	27,661	36,639
East.....	Sergipe.....	420	750	800
	Baía.....	11,960	25,000	25,400
	Espirito Santo.....	23	30	30
	TOTALS.....	12,403	25,780	26,230
South.....	Rio de Janeiro.....	478	495	660
	São Paulo.....	4,500	9,540	10,730
	Paraná.....	207	344	391
	Santa Catarina.....	7	10	12
	Rio Grande do Sul.....	274	368	260
	TOTALS.....	5,466	10,757	12,053
Central.....	Mato Grosso.....	4	6	68
	Goiás.....	21	27	28
	Minas Gerais.....	6,750	10,899	9,000
	TOTALS.....	6,775	10,932	9,096
BRAZIL.....		46,321	76,268	85,333

Note — The 1937 data is subject to rectification.

## EXPORTATION OF MAMONA

Quantity and value during the 1926-1937 period

a) — Seed

YEARS	Quantity (kilos)	VALUE	
		In milrêis	Equivalent in pounds sterling
1926.....	14,575,330	7,858,408	223,352
1927.....	15,975,284	8,179,939	198,718
1928.....	8,351,987	4,799,846	117,745
1929.....	20,863,346	12,325,512	302,740
1930.....	22,426,289	11,519,198	256,243
1931.....	19,285,776	11,065,001	151,741
1932.....	12,348,012	5,950,556	84,464
1933.....	35,555,951	15,964,926	198,114
1934.....	42,794,809	20,091,216	207,103
1935.....	71,571,882	45,653,156	320,000
1936.....	102,055,932	73,942,364	590,263
1937.....	119,916,399	91,298,878	745,852

## EXPORTATION OF MAMONA

Quantity and value during the 1926-1937 period

b) — Oil

YEARS	Quantity (kilos)	VALUE	
		In milréis	Equivalent in pounds sterling
1926 .....	26,578	42,010	1,133
1927 .....	36,190	56,890	1,381
1928 .....	30,739	70,030	1,719
1929 .....	11,180	24,385	599
1930 .....	27,950	54,759	1,199
1931 .....	28,187	59,424	845
1932 .....	169,228	332,550	5,061
1933 .....	68,807	145,594	1,907
1934 .....	191,600	287,052	2,930
1935 .....	188,137	267,626	2,174
1936 .....	392,838	756,747	6,122
1937 .....	202,474	368,860	3,057

Quantity and value of seed according to destination in 1937

DESTINATION	Quantity (kilos)	Value (milréis)
Belgo-Luxemburg Union .....	22,988,782	17,326,596
Chile .....	22,180	22,554
France .....	9,131,623	6,819,365
Germany .....	1,182,827	940,457
Great Britain .....	9,475,085	6,723,590
Italy .....	10,645,368	8,718,725
Japan .....	343,717	285,886
Netherlands .....	1,608,117	1,273,458
United States .....	64,518,720	49,188,247
TOTALS .....	119,916,399	91,298,878

## MANIOC

**M**ANIOC is a cassava plant, denominated Mandioca in Portuguese and in Tupí. It belongs to the tuberous group. There is no other vegetable with roots producing such a lot of nutritive material. It contains a large quantity of starch, fat, dextrin, glucose. The highest producing wheat or rice fields are unable to give nourishment to as many people as could be fed by a well planted manioc field of identical acreage. The average production, per hectare, of a manioc field is from 10,000 to 18,000 kilos of bulbs, by manual cultivation, and from 15,000 to 20,000 kilos, when mechanical appliances are used. Manioc flour figures in the every day alimentation of a great part of the Brazilian People, and this fact shows at once its economic importance. Nowadays it is obligatorily included in the components of mixed bread, without modifying in the slightest degree the natural taste or nutritive properties of same, thus helping to reduce the quantity of wheat flour used. It has also been satisfactorily demonstrated that manioc is excellent raw material for the manufacture of motor alcohol (cane spirit), the production of which will equally enable us to reduce our imports, as regards gasoline. Owing to the present demand for manioc and to the purposes for which it is used, including the two hereinbefore mentioned, the cultivation of same, which is quite an easy matter, will become one of the most important activities in our country.

## PRODUCTION OF MANIOC

a) — Quantity

GEOGRAPHICAL ZONES AND FEDERATED UNITS		QUANTITY (tons)		
		Average 1931/1933	1936	1937
North.....	Territory of Acre.....	32,500	36,000	36,500
	Amazonas.....	34,633	27,000	30,000
	Pará.....	165,833	165,000	171,000
	Maranhão.....	186,700	219,000	220,500
	Piauí.....	30,033	22,850	24,000
	TOTALS.....	449,699	469,850	482,000
North-East.....	Ceará.....	216,267	420,000	405,000
	Rio Grande do Norte.....	33,867	39,000	38,900
	Paraíba.....	181,767	234,000	179,500
	Pernambuco.....	708,133	625,640	526,565
	Alagoas.....	137,900	256,500	242,040
	TOTALS.....	1,277,934	1,575,140	1,392,005
East.....	Sergipe.....	280,200	340,000	370,000
	Baía.....	362,200	300,000	360,000
	Espírito Santo.....	77,800	99,000	105,000
	TOTALS.....	720,200	739,000	835,000
South.....	Rio de Janeiro.....	159,667	130,100	184,600
	São Paulo.....	398,833	217,500	420,000
	Paraná.....	251,433	240,000	270,000
	Santa Catarina.....	173,100	180,000	195,000
	Rio Grande do Sul.....	1,315,667	510,000	513,800
	TOTALS.....	2,298,700	1,277,600	1,583,400
Central.....	Mato Grosso.....	16,833	10,000	26,100
	Goiás.....	122,567	123,000	135,000
	Minas Gerais.....	127,567	752,260	765,000
	TOTALS.....	266,967	885,260	926,100
BRAZIL.....		5,013,500	4,946,850	5,218,505

b) — Value

GEOGRAPHICAL ZONES AND FEDERATED UNITS		VALUE (contos of réis)		
		Average 1931/1933	1936	1937
North.....	Territory of Acre.....	2,600	3,312	3,431
	Amazonas.....	3,232	2,700	3,000
	Pará.....	16,583	15,675	16,758
	Maranhão.....	16,808	20,148	20,948
	Piauí.....	2,818	2,102	2,280
	TOTALS.....	42,036	43,937	46,417



## PRODUCTION OF MANIOC

b) — Value

GEOGRAPHICAL ZONES AND FEDERATED UNITS		VALUE (contos of réis)		
		Average 1931/1933	1936	1937
North-East.....	Ceará.....	20,880	42,000	40,500
	Rio Grande do Norte.....	3,387	4,290	4,279
	Paraíba.....	17,553	32,760	25,130
	Pernambuco.....	56,651	57,559	48,971
	Alagoas.....	12,320	30,780	30,255
	TOTALS.....	110,791	167,389	149,135
East.....	Sergipe.....	25,574	34,000	33,850
	Baía.....	36,220	33,000	39,600
	Espírito Santo.....	9,445	13,860	14,700
	TOTALS.....	71,239	80,860	93,150
South.....	Rio de Janeiro.....	16,481	15,612	20,306
	São Paulo.....	45,364	30,450	58,800
	Paraná.....	23,561	28,800	33,750
	Santa Catarina.....	11,898	16,200	17,940
	Rio Grande do Sul.....	65,783	45,900	41,104
	TOTALS.....	163,087	136,962	171,900
Central.....	Mato Grosso.....	1,502	900	2,818
	Goiaz.....	9,805	12,300	13,500
	Minas Gerais.....	11,481	60,181	61,200
	TOTALS.....	22,788	73,381	77,518
BRAZIL.....		409,941	502,529	538,120

Note — The 1937 data is subject to rectification.

## PRODUCTION OF MANIOC FLOUR

a) — Quantity

GEOGRAPHICAL ZONES AND FEDERATED UNITS		QUANTITY (60 kilo bags)		
		Average 1929/1933	1936	1937
North.....	Territory of Acre.....	116,520	120,000	125,000
	Amazonas.....	127,865	90,000	100,000
	Pará.....	568,030	550,000	570,000
	Maranhão.....	699,710	730,000	735,000
	Piauí.....	104,495	76,160	80,000
	TOTALS.....	1,616,620	1,566,160	1,610,000
North-East.....	Ceará.....	969,186	1,400,000	1,350,000
	Rio Grande do Norte.....	132,720	124,340	124,000
	Paraíba.....	662,698	780,000	598,230
	Pernambuco.....	2,267,507	2,398,300	2,018,500
	Alagoas.....	425,310	855,200	780,690
	TOTALS.....	4,457,421	5,557,840	4,871,420

PRODUCTION OF MANIOC FLOUR

a) — Quantity

GEOGRAPHICAL ZONES AND FEDERATED UNITS		QUANTITY (60 kilo bags)		
		Average 1929/1933	1936	1937
East.....	Sergipe.....	922,822	1,450,000	1,500,000
	Baia.....	1,317,537	1,000,000	1,200,000
	Espírito Santo.....	199,200	330,000	350,000
	TOTALS.....	2,439,559	2,780,000	3,050,000
South.....	Rio de Janeiro.....	517,583	433,750	622,700
	São Paulo.....	1,186,843	724,900	1,400,000
	Paraná.....	719,504	800,000	900,000
	Santa Catarina.....	508,752	600,000	650,000
	Rio Grande do Sul.....	4,575,086	1,000,000	1,200,000
	TOTALS.....	7,507,768	3,558,650	4,772,700
Central.....	Mato Grosso.....	39,196	24,000	68,250
	Goiás.....	432,622	410,000	450,000
	Minas Gerais.....	434,500	707,960	700,000
	TOTALS.....	906,318	1,141,960	1,218,250
BRAZIL.....		16,927,686	14,604,610	15,522,370

b) — Value

GEOGRAPHICAL ZONES AND FEDERATED UNITS		VALUE (contos of réis)		
		Average 1929/1933	1936	1937
North.....	Territory of Acre.....	1,358	1,944	2,250
	Amazonas.....	1,584	1,620	2,100
	Pará.....	8,892	9,900	10,944
	Maranhão.....	10,144	10,950	13,230
	Piauí.....	1,569	1,142	1,440
	TOTALS.....	23,547	25,556	29,964
North-East.....	Ceará.....	14,488	29,400	28,350
	Rio Grande do Norte.....	2,023	2,760	2,976
	Paraíba.....	9,798	16,380	14,358
	Pernambuco.....	35,188	50,364	48,444
	Alagoas.....	8,447	20,525	19,673
	TOTALS.....	69,944	119,429	113,801
East.....	Sergipe.....	13,245	26,100	28,800
	Baia.....	20,157	21,000	25,200
	Espírito Santo.....	3,524	6,930	7,350
	TOTALS.....	36,926	54,030	61,350
South.....	Rio de Janeiro.....	8,254	9,586	14,945
	São Paulo.....	19,130	13,048	29,400
	Paraná.....	9,512	13,920	17,280
	Santa Catarina.....	5,650	7,200	8,580
	Rio Grande do Sul.....	44,313	12,000	15,840
	TOTALS.....	86,859	55,754	86,045
Central.....	Mato Grosso.....	534	432	1,941
	Goiás.....	5,076	6,150	7,290
	Minas Gerais.....	5,979	10,887	10,920
	TOTALS.....	11,589	17,469	20,151
BRAZIL.....		228,865	272,238	311,311

Note — The 1937 data is subject to rectification.

## EXPORTATION OF MANIOC FLOUR

Quantity and value during the 1926-1937 period

YEARS	Quantity (kilos)	VALUE	
		In milrêis	Equivalent in pounds sterling
1926.....	5,022,003	2,273,542	67,972
1927.....	4,817,067	2,187,017	53,200
1928.....	4,556,600	2,083,113	51,127
1929.....	5,774,446	2,473,531	60,775
1930.....	3,997,630	1,656,098	37,551
1931.....	4,037,627	1,634,607	23,749
1932.....	4,702,850	2,206,931	32,980
1933.....	5,481,928	2,180,552	27,783
1934.....	14,808,990	5,210,863	53,017
1935.....	19,314,576	7,417,854	60,000
1936.....	9,731,699	3,764,560	29,975
1937.....	3,196,065	1,636,750	13,325

Quantity and value, according to destination in 1937

DESTINATION	Quantity (kilos)	Value (milrêis)
Argentina.....	2,141,750	1,085,912
Belgo-Luxemburg Union.....	50,000	25,950
Bolivia.....	30,515	24,080
Columbia.....	280	328
France.....	510	200
Great Britain.....	120,600	52,251
Portugal.....	132,170	105,768
United States.....	7,890	4,778
Uruguay.....	712,350	337,483
TOTALS.....	3,196,065	1,636,750

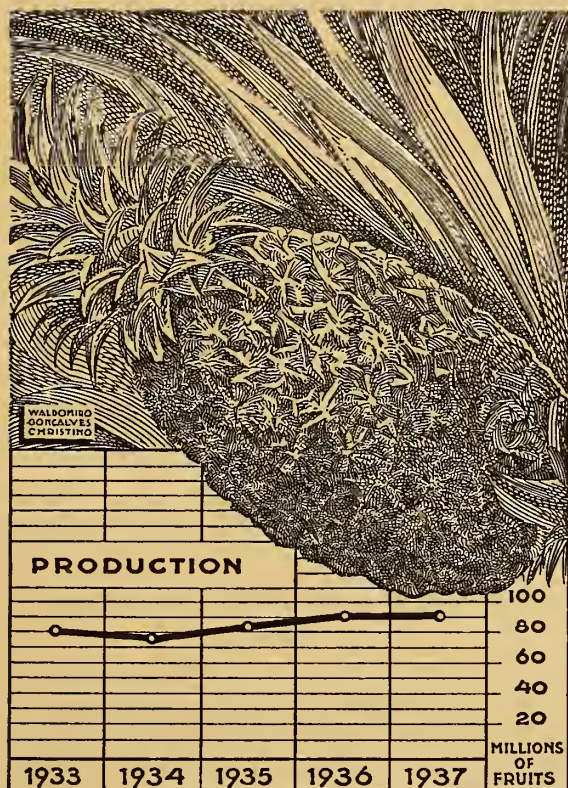
## PEANUTS

THE peanut is an autochthon plant of South America, and botanists believe that Brazil is its land of origin. The largest plantations are to be found in the South of Brazil, but the peanut flourishes in any part of our vast territory. Its cultivation is a most profitable undertaking. The most important by-product of said native plant is its oil, which can be used as a substitute for olive oil and for a long time now has been extensively used for making peanut butter, for which there is always a great demand, mainly in the U. S. A. The branches and roots of the peanut plant make splendid cattle cakes.

This plant is one of the easiest to cultivate, very little work being required, its cultivation being a very remunerative undertaking. One hectare of good soil produces eight thousand kilos of peanuts. Although Brazil is the native land of the peanut, our plantations are still very small in comparison with those of other countries. There is, however, every probability that we will become the greatest peanut growers in the world.



## PINEAPPLES



THERE is no tropical fruit more delicious than the pineapple. Although extensively grown in Brazil, in all the States of the Union, the pineapple does not occupy, on our exportation list, the place that it deserves. The overseas demand would be much stronger, and therefore much greater the number exported, if the price was not so high. If the price be brought down, then no other Brazilian fruit will sell so well on the world's markets. Our principal customers at the present time are Argentina and Great Britain. However, the large areas eminently suited for growing the approved class of pineapples are capable of considerable extension, both to cover the local market demand and to increase the export trade.

The total Brazilian production of pineapples in the last five years has been distributed as follows, according to the quantity of fruits: 1933—80,549,000; 1934—77,029,900; 1935—83,167,500; 1936—90,697,000; 1937—90,881,200.

## PRODUCTION OF PINEAPPLES

a) — Quantity

GEOGRAPHICAL ZONES AND FEDERATED UNITS		QUANTITY (fruits)		
		Average 1931/1933	1936	1937
North.....	Territory of Acre.....	102,933	100,000	95,000
	Amazonas.....	411,333	350,000	300,000
	Pará.....	2,747,333	2,500,000	2,550,000
	Maranhão.....	532,933	350,000	360,000
	Piauí.....	513,800	506,000	510,000
	TOTALS.....	4,308,332	3,806,000	3,815,000
North-East.....	Ceará.....	616,400	550,000	560,000
	Rio Grande do Norte.....	1,444,367	708,500	700,000
	Paraíba.....	4,890,900	3,500,000	4,225,700
	Pernambuco.....	25,904,200	24,000,000	23,000,000
	Alagoas.....	257,400	230,000	240,000
	TOTALS.....	33,113,267	28,988,500	28,725,700



## PRODUCTION OF PINEAPPLES

## a) — Quantity

GEOGRAPHICAL ZONES AND FEDERATED UNITS		QUANTITY (fruits)		
		Average 1931/1933	1938	1937
East.....	Sergipe.....	265,300	80 000	90,000
	Baia.....	5,529,300	5,200,000	5,300,000
	Espirito Santo.....	308,200	300,000	350,000
	TOTALS.....	6,102,800	5,580,000	5,740,000
South.....	Rio de Janeiro.....	15,813,867	13,985,000	12,820,000
	São Paulo.....	22,338,367	21,781,000	25,000,000
	Paraná.....	1,003,167	950,000	1,000,000
	Santa Catarina.....	717,867	650,000	680,000
	TOTALS.....	39,873,268	37,366,000	39,500,000
Central.....	Mato Grosso.....	308,867	150,000	230,500
	Goiás.....	360,333	350,000	370,000
	Minas Gerais.....	2,782,800	14,456,500	12,500,000
	TOTALS.....	3,452,000	14,956,500	13,100,500
BRAZIL.....		86,849,667	90,697,000	90,881,200

## b) — Value

GEOGRAPHICAL ZONES AND FEDERATED UNITS		VALUE (contos of réle)		
		Average 1931/1933	1938	1937
North.....	Territory of Acre.....	16	30	29
	Amazonas.....	74	105	90
	Pará.....	509	625	689
	Maranhão.....	88	105	108
	Piauí.....	94	142	143
	TOTALS.....	781	1,007	1,059
North-East.....	Ceará.....	74	138	151
	Rio Grande do Norte.....	267	213	210
	Paraíba.....	1,354	770	1,056
	Pernambuco.....	5,878	6,000	5,750
	Alagoas.....	47	69	72
	TOTALS.....	7,620	7,190	7,239
East.....	Sergipe.....	49	28	32
	Baia.....	1,527	1,300	1,325
	Espirito Santo.....	53	84	98
	TOTALS.....	1,629	1,412	1,455
South.....	Rio de Janeiro.....	4,348	3,636	3,077
	São Paulo.....	6,112	5,445	7,500
	Paraná.....	184	285	300
	Santa Catarina.....	119	195	204
	TOTALS.....	10,763	9,561	11,081
Central.....	Mato Grosso.....	51	45	78
	Goiás.....	61	105	111
	Minas Gerais.....	512	2,891	3,125
	TOTALS.....	624	3,041	3,314
BRAZIL.....		21,417	22,211	24,148

Note — The 1937 data is subject to rectification.

# EXPORTATION OF PINEAPPLES

Quantity and value during the 1926-1937 period

YEARS	Quantity (kilos)	VALUE	
		In milréis	Equivalent in pounds sterling
1926.....	1,274,130	1,221,665	32,781
1927.....	795,148	744,860	18,211
1928.....	1,278,959	1,306,413	32,039
1929.....	1,676,460	1,942,383	47,739
1930.....	2,837,070	2,877,618	59,943
1931.....	2,045,817	1,935,036	27,199
1932.....	1,722,923	818,480	12,444
1933.....	1,111,421	726,262	8,086
1934.....	1,754,685	1,612,594	16,842
1935.....	3,213,515	3,239,656	25,246
1936.....	3,171,141	1,594,831	12,879
1937.....	4,816,658	3,352,040	23,915

Quantity and value, according to destination in 1937

DESTINATION	Quantity (kilos)	Value (milréis)
Argentina.....	4,294,488	3,028,714
Belgo-Luxemburg Union.....	31,000	18,500
France.....	1,500	1,100
Germany.....	47,340	27,000
Great Britain.....	26,375	14,500
Italy.....	475	350
Netherlands.....	1,750	1,300
Norway.....	9,000	4,000
Sweden.....	2,000	2,200
United States.....	800	1,020
Uruguay.....	401,930	253,356
TOTALS.....	4,816,658	3,352,040

# POTATOES

**A**MONG the principal articles of farm produce used as food by human-kind, potatoes occupy the 6th place. Notwithstanding their name (potatoes are called "batatas inglesas" in Portuguese), they had their origin in American countries—Perú and Mexico,—and were taken to Europe by the Spanish in the XVI Century, and grown, at first, as an ornamental plant. The poor harvests of the XVIII Century, however, caused the Europeans to recognize the nutritive value of potatoes. But, even so, potato planting only developed when Frederick the Great, of Germany, made potato planting obligatory, thus overcoming the people's opposition to the American plant. Nowadays potatoes are grown in all temperate climate countries throughout the world. The tuber of the potato, which is very rich in starch, is not a root as at the first glance it seems to be, but an underground stem.

## PRODUCTION OF POTATOES

## a) — Quantity

GEOGRAPHICAL ZONES AND FEDERATED UNITS		QUANTITY (tons)		
		Average 1929/1933	1936	1937
North-East.....	Paraíba.....	1,373	950	700
	TOTALS.....	1,373	950	700
East.....	Sergipe.....	92	12	15
	Bahia.....	—	2,600	2,700
	Espírito Santo.....	239	900	1,000
	TOTALS.....	331	3,512	3,715
South.....	Rio de Janeiro.....	8,370	8,850	9,420
	São Paulo.....	123,111	115,046	100,000
	Paraná.....	42,912	42,000	45,000
	Santa Catarina.....	8,753	9,500	10,000
	Rio Grande do Sul.....	130,031	130,520	131,523
	TOTALS.....	313,177	305,916	295,943
Central.....	Mato Grosso.....	198	300	3,867
	Goiás.....	1,822	1,200	1,500
	Minas Gerais.....	23,132	23,128	23,152
	TOTALS.....	25,152	24,628	28,519
BRAZIL.....		340,033	335,006	328,877

## b) — Value

GEOGRAPHICAL ZONES AND FEDERATED UNITS		VALUE (contos of réis)		
		Average 1929/1933	1936	1937
North-East.....	Paraíba.....	326	428	350
	TOTALS.....	326	428	350
East.....	Sergipe.....	28	5	6
	Bahia.....	—	1,040	1,134
	Espírito Santo.....	69	540	600
	TOTALS.....	97	1,585	1,740
South.....	Rio de Janeiro.....	2,392	3,717	3,485
	São Paulo.....	58,782	57,523	50,000
	Paraná.....	14,177	18,900	20,250
	Santa Catarina.....	2,488	2,850	3,200
	Rio Grande do Sul.....	47,955	39,156	39,457
	TOTALS.....	125,794	122,146	116,392
Central.....	Mato Grosso.....	50	120	1,552
	Goiás.....	672	480	600
	Minas Gerais.....	9,379	11,362	11,576
	TOTALS.....	10,101	11,962	13,728
BRAZIL.....		136,318	136,121	132,210

Note — The 1937 data is subject to rectification.

## RICE

**R**ICE is one of the oldest and most important agricultural products. Two Thousand, Eight Hundred years before the Christian Era, rice was already being planted in China. Quite a lot of people, or to be more exact, half of Humankind, bases its alimentation on rice. The Chinese, Japanese and the component Peoples of various other divisions of the human race, make this product their principal aliment. And, as in the countries that habitually consume wheat bread the respective inhabitants also eat rice, it is evident that the worldwide consumption of rice is even greater than that of wheat.

Among our major agricultural products, rice is one of the most important and is included in the group of those that must be developed on the largest scale. Brazilian rice plantations now occupy an area of more than a million hectares. São Paulo, Rio Grande do Sul and Minas Gerais are the States which grow the largest quantity of this very necessary aliment. Brazil occupies 3rd place on the list of the world's rice producing countries.

## PRODUCTION OF RICE

a) — Quantity

GEOGRAPHICAL ZONES AND FEDERATED UNITS		QUANTITY (60 kilo bags)		
		Average 1929/1933	1936	1937
North.....	Territory of Acre.....	35,278	35,000	36,000
	Amazonas.....	13,168	14,500	15,000
	Pará.....	235,587	245,000	250,000
	Maranhão.....	442,974	550,000	560,000
	Piauí.....	135,247	135,500	140,000
	TOTALS.....	862,254	980,000	1,001,000
North-East.....	Ceará.....	299,521	220,000	200,000
	Rio Grande do Norte.....	17,334	6,350	6,000
	Paraíba.....	39,806	65,000	70,230
	Pernambuco.....	9,538	13,330	12,000
	Alagoas.....	166,912	128,290	165,700
	TOTALS.....	533,111	432,970	453,930
East.....	Sergipe.....	113,124	88,000	90,000
	Baía.....	153,342	150,000	160,000
	Espírito Santo.....	74,776	135,000	140,000
	TOTALS.....	341,242	373,000	390,000
South.....	Rio de Janeiro.....	262,334	684,400	700,000
	São Paulo.....	7,948,240	7,517,510	8,000,000
	Paraná.....	184,223	180,000	200,000
	Santa Catarina.....	359,260	250,000	280,000
	Rio Grande do Sul.....	3,527,547	3,807,450	3,706,600
	TOTALS.....	12,281,604	12,439,360	12,886,600
Central.....	Mato Grosso.....	147,494	300,000	209,950
	Goiás.....	1,168,873	1,480,000	1,500,000
	Minas Gerais.....	2,486,558	4,221,000	4,314,000
	TOTALS.....	3,802,925	6,001,000	6,023,950
BRAZIL.....		17,821,136	20,226,330	20,755,480



## PRODUCTION OF RICE

b) — Value

GEOGRAPHICAL ZONES AND FEDERATED UNITS		VALUE (contos of réis)		
		Average 1929/1933	1936	1937
North.....	Territory of Acre.....	535	1,050	1,188
	Amazonas.....	192	435	495
	Pará.....	4,076	8,085	9,000
	Maranhão.....	7,311	13,200	15,120
	Piauí.....	2,234	4,065	4,620
	TOTALS.....	14,348	26,835	30,423
North-East.....	Ceará.....	5,220	6,600	6,600
	Rio Grande do Norte.....	314	248	234
	Paraíba.....	783	1,950	2,191
	Pernambuco.....	212	480	432
	Alagoas.....	5,084	4,388	5,667
	TOTALS.....	11,613	13,666	15,124
East.....	Sergipe.....	2,285	3,168	3,240
	Baía.....	3,341	4,950	5,280
	Espírito Santo.....	1,309	4,050	4,368
	TOTALS.....	6,935	12,168	12,888
South.....	Rio de Janeiro.....	4,939	20,532	29,400
	São Paulo.....	148,886	248,078	273,600
	Paraná.....	3,467	5,940	6,840
	Santa Catarina.....	6,839	7,500	8,736
	Rio Grande do Sul.....	64,271	114,224	124,542
	TOTALS.....	228,402	396,274	443,118
Central.....	Mato Grosso.....	2,109	9,900	6,795
	Goiás.....	15,902	44,400	49,500
	Minas Gerais.....	48,497	164,619	168,246
	TOTALS.....	66,508	218,919	224,541
BRAZIL.....		327,806	667,862	726,094

Note— The 1937 data is subject to rectification.

## EXPORTATION OF RICE

Quantity and value during the 1925-1937 period

YEARS	Quantity (tons)	VALUE	
		In milrêis	Equivalent in pounds sterling
1925.....	337	464,286	10,651
1926.....	7,479	5,044,180	155,796
1927.....	16,630	11,841,933	287,740
1928.....	739	802,977	19,715
1929.....	6,613	5,574,632	137,036
1930.....	38,341	25,399,313	558,698
1931.....	90,384	55,213,856	787,018
1932.....	27,937	18,137,130	263,157
1933.....	25,391	18,132,637	213,479
1934.....	33,285	25,561,197	258,648
1935.....	94,642	63,706,000	499,000
1936.....	53,345	38,490,000	306,000
1937.....	31,295	20,064,727	170,000

## EXPORTATION OF RICE

Quantity and value, according to destination in 1937

DESTINATION	Quantity (kilos)	Value (mlrêls)
a) — Without shell		
Bolivia.....	45,660	50,155
Colombia.....	90,365	110,173
France.....	200,000	222,258
Germany.....	1,560	1,560
Gibraltar.....	300	600
Great Britain.....	224,436	251,634
Italy.....	24,947	27,869
Peru.....	86,580	113,324
Poland.....	4,200	4,945
Portugal.....	180	200
TOTALS.....	678,228	782,718
b) — With shell		
Argentina.....	30,031,964	18,902,866
Belgo-Luxemburg Union.....	500	495
France.....	300	163
Norway.....	50,000	35,734
Uruguay.....	533,921	342,751
TOTALS.....	30,616,685	19,282,009

## RYE

THE cultivation of rye in Brazil is being carried on in the three southernmost States of the country. In 1936, the area under cultivation amounted to 14,000 hectares. In the State of Santa Catarina the average production is one ton per hectare, while Paraná and Rio Grande do Sul show higher figures.

In recent times the fostering of wheat growth sponsored by the Ministry of Agriculture, in its policy towards furthering staple crop production, has somewhat swayed farmer's interest from rye cultivation. Nevertheless, the production of the three States referred to was 16,000,000 kilos as will be seen in the table below.

## PRODUCTION OF RYE

a) — Quantity

GEOGRAPHICAL ZONE AND FEDERATED UNITS		QUANTITY (kilos)		
		Average 1929/1933	1936	1937
South.....	Paraná.....	7,511,180	7,000,000	7,200,000
	Santa Catarina.....	2,251,200	1,900,000	2,000,000
	Rio Grande do Sul.....	6,862,400	6,530,000	6,800,000
	TOTALS.....	16,624,780	15,430,000	16,000,000
BRAZIL.....		16,624,780	15,430,000	16,000,000

## PRODUCTION OF RYE

b) — Value

GEOGRAPHICAL ZONE AND FEDERATED UNITS		VALUE (contos of réls)		
		Average 1929/1933	1936	1937
South.....	Paraná.....	2,304	1,960	2,160
	Santa Catarina.....	819	608	700
	Rio Grande do Sul.....	2,592	2,286	3,060
	TOTALS.....	5,715	4,854	5,920
BRAZIL.....		5,715	4,854	5,920

Note — The 1937 data is subject to rectification.

## SERICULTURE

THE natural ambient of Brazil is highly propitious to silkworm breeding. A combination of favorable circumstances assures to the silk industry, in Brazil, a sure and profitable development on a scale attained in no other country in the world. To comprehend the reason for this auspicious state of affairs, all one has to do is to take into account the fact that, while the silkworm breeders of Europe and Asia manage to get, at the most, three cocoon harvests per annum, in Brazil one can obtain from four to eight yearly crops. In certain regions of the extreme North of Brazil there has even been attained the record number of 12 (twelve) cocoon harvests in the period of one year. There has also been verified another feature showing the fruitfulness of Northern Brazilian soil: the extraordinary rapidity with which the mulberry tree grows in said region. When only four months old, this member of our flora is quite suitable for the alimentation of silkworms. Through the proper use of stakes, the mulberry tree multiplies with a facility encountered in no other part of the world, grows rapidly and produces abundantly throughout the year. Besides this, the silkworm encounters, in Brazil, living conditions most favorable to its development and which permit it to live, free from the diseases that, in Europe, frequently decimate same. Nevertheless, although it has developed year by year up to a certain point, the Brazilian silkworm breeding industry is still far from attaining the high production level to be expected of same. However, in its earnest endeavour to encourage the progress of the silkworm breeding industry, the Government is granting every possible aid to the silkworm breeders, facilitating the distribution of mulberry tree sprouts and "bombix-mori" cocoons and also helping private initiatives. The "Inspeçtoria Regional de Sericicultura" (Regional Inspectorate of Sericiculture), whose headquarters is at Barbacena, in the State of Minas Gerais, is the official organ for the promotion of the silkworm breeding industry in Brazil.

One may therefore conclude that, owing to the magnificent natural conditions of the country and the progress made in the last few years, sericulture will become, perhaps in the near future, one of the larger sources of wealth in Brazilian economics.



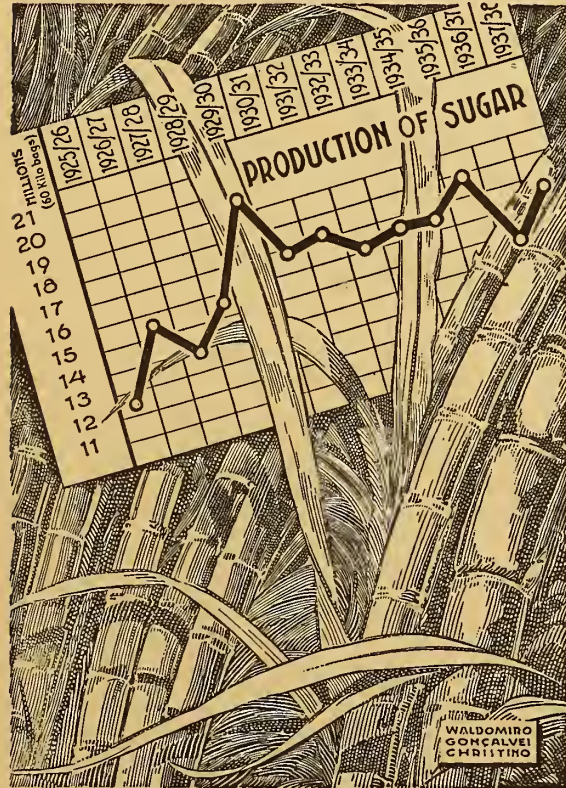
# SUGAR

## INTRODUCTORY

THE liberal principles of free exchange were still in good acceptance, when the intervening and protective doctrines had already been applied to sugar economy which thus presented itself as a kind of precursor. This is Mr. Reynier's sentence, pointing out an evident reality in almost

all the world. A first rate commodity, being able to be produced in the most different latitudes and climates, sugar has been a pioneer of directed economy or, at least, of the intervention of the State in the economic sector corresponding to it.

Brazil could not avoid this fatality. On several opportune occasions during big harvests, various corporations came out to avoid at least part of the inconveniences of super-production. But they were always ephemeral efforts and initiatives which came to an end with the biggest harvest that had given origin to them. So far, in 1931, the Brazilian crisis, aggravated by the universal one, brought forth the first steps to remedy this state of affairs by the creation of the sugar policy in Brazil. To make clear the meaning of this new intervention, it is



enough to say that it came from the Section of Liquidations of the "Banco do Brasil" (Bank of Brazil), at the sight of the complete ruin reached by the sugar industry in one of the regions most propitious to the development of sugar-cane plantng. However, the measures adopted in 1931 were sufficient to avoid the expected ruin. In 1933, the consolidation of sugar policies brought forth the creation of the Sugar and Alcohol Institute superintended by Mr. Leonardo Truda, under the deliberate protection of President Getulio Vargas. The general lines of such intervention in the sugar economy may be shown by the following items:

*I* — Limitation of production by fixing the quotas, on the basis of the average of the quinquennium preceding the creation of the Institute.

*II* — Supply of resources to the planters. It was necessary to take care to avoid the skill of the speculators and middlemen, who, taking advantage



of the abundance of production, at the proper time, forced the fall of the price in order to raise it afterwards in the inter-harvest period.

*III* — Creation of the motor-alcohol policy, in order to profit by the excess of sugar-cane production. For this purpose, the Institute tries to stimulate the production of anhydrous alcohol to be mixed with gasoline

Such are the purposes of the Institute. Let us see now what it has accomplished.

*1*) — As to limitation, it avoided the evils of a too restrictive system, that would surely be prejudicial to consumption. There was no scarceness of sugar in Brazil, which disposes of an export quota for the free market (60,000 tons), according to the Convention of London. Since the foundation of the Institute, none of the harvests have attained the limit of production,— which proves that there has been no sacrifice for the planter in the adoption of the quotas. If we could not make use, in two harvests, of the quota for the international market, it was because a terrible drought, scourging the States of the Brazilian North-East, caused an unexpected reduction in the size of the crops.

*2*) — As to the furnishing of resources, the Institute has already invested, in the purchase of sugar, under the condition of retrosale and reversion, the following sums:

<i>HARVESTS</i>	<i>VALUE (milréis)</i>
1933/34.....	35,745,350,960
1934/35.....	48,123,999,000
1935/36.....	49,261,491,000
1936/37.....	37,134,516,600
1937/38.....	34,413,218,000
<b>TOTAL.....</b>	<b>204,678,575,560</b>

Because of such an actuation, prices became fixed, both in the wholesale and in the retail market. In the inter-harvest period, the big oscillations ceased, and this gave to the planter the benefit hitherto enjoyed by the middleman. It suffices to say that said price fluctuations sometimes reached the sum of 13\$000 (thirteen milréis), or more. Since the creation of the Institute, they vary from 2\$000 (two milréis) to 3\$000 (three milréis) per bag. At present, when it so happens that a price fluctuation occurs, it is always in favour of the planter, while it represented formerly the speculation and the profit of the middleman.

*3*) — As to anhydrous alcohol, the Institute has already lent about 14,000 "contos of réis" to private distilleries, properly equipped for the production of same. Besides this, the Institute installed, in Campos, for this purpose, a distillery having a daily capacity of 60,000 litres, while another one is being built, with the same capacity, in Pernambuco, scheduled to begin to work in September of this year, and a third distillery is being constructed at Ponte Nova, in the State of Minas Gerais, with the per diem capacity of 20,000 litres. The influence of the Institute may be seen in the following observation: In 1933, there was but one distillery of anhydrous alcohol, in Brazil, with the capacity of 12,000 litres per day. In 1937, we have 27 distilleries with a daily capacity of 377,000 litres.

These figures show the success of the sugar policy adopted by President Getúlio Vargas. If we wanted to speak of new elements of sugar economy, it would be easy to present other indexes of its prosperity. But it is sufficient to show what we have done, at a moment of general crisis.

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*By Barbosa Lima Sobrinho.*

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Sugar cane growing and its industrial uses are the oldest of the agricultural occupations in Brazil. They date back to the early days of the Portuguese settlement and have thus been the first organized source of wealth upon which the inceptive colonial economics depended.

By developing sugar cane planting in certain north-eastern zones where the ecological conditions were most suited for said cultivation, the successful industry did play a greatly important rôle in the social formation of the region. The old sugar "engenhos" (mills) and "casas grandes" (farmer's large houses or homes) of a notably typical touch, have even exercised a civilizing influence which left profound traces on the evolution of the Brazilian society. Old chroniclers mention the luxury and wealth of many colonists and "senhores de engenho" (gentleman-owners of mills) who were able then to keep up an exceptional standard of living, of course, out of the ordinary at that time, thanks to their fairly profitable cane plantations and sugar industry.

Notwithstanding the rather rudimentary methods first used in manufacturing sugar, the production went up to such a high level of yielding that, from 1600 to 1700 Brazil dominated the trade of this commodity to the very extent of surpassing the earnings derived from the mining cycle. After a few collapses and even discouragement, the advent of the steam sugar mills at the beginning of the XIX century marked a phase of revival for the industry which had been through an appalling experience in the course of the XVIII century.

The international sugar depression, caused by the Great War, had quite an intense repercussion over Brazil. The situation led the Government to do something to control the industry. A remedy was thus sought in various protective measures concerning the production, and the sugar cane branch and its by-products came to be under the supervision of a specially designed organ: the "Instituto do Açúcar e do Alcool".

In view of the favourable results arising from the Government assistance and the enterprising thought of the producing leaders in the field, sugar industry is undergoing successive technical improvements and, today, it boasts of some really model establishments in the States of Pernambuco, Alagoas, São Paulo and Rio de Janeiro.

The developments occurred likewise as regards improving the methods both for selection of the plants and other rationally planned farming operations, have been most significant and impressive. At the same time, the fomenting of the expansion of cane by-products, such as aguardente (a largely drunken distilled liquor, a sort of rum, generally clear, sometimes slightly yellow-red-dish in color) and alcohol, the latter used for several potable and industrial purposes, including motor-spirit, has been a definite and valuable part of our policy to raise the productivity of sugar industry along lines favouring the addition of new sources of wealth to the sugar cane economics.

Sugar cane ranks fourth in value on the general statement of the Brazilian crop-production, and its average yield per acre is quite considerable as compared with several other indigenous farm materials.

## SUGAR, ALCOHOL AND AGUARDENTE

Number of factories, pursuant to locality, on December 31, 1938

FEDERATED UNITS	Plants equipped with vacuum turbines	Plants with non vacuum turbine equipment	Sugar and "ra- padura" (1) mills	Establishments exclusively en- gaged in making aguardente	Totals
Territory of Acre.....	—	1	94	5	100
Amazonas.....	—	8	58	35	101
Pará.....	6	4	71	75	156
Maranhão.....	4	9	512	380	905
Piauí.....	1	2	1,394	98	1,495
Ceará.....	2	16	1,938	402	2,358
Rio Grande do Norte.....	3	—	493	31	527
Paraíba.....	9	—	1,181	193	1,383
Pernambuco.....	69	—	1,769	98	1,936
Alagoas.....	29	—	594	105	728
Sergipe.....	87	—	122	43	252
Baía.....	17	4	1,744	503	2,268
Espírito Santo.....	2	6	167	266	441
Rio de Janeiro.....	31	13	1,717	463	2,224
São Paulo.....	35	193	1,307	1,894	3,429
Paraná.....	—	5	93	238	336
Santa Catarina.....	3	1	4,854	511	5,369
Rio Grande do Sul.....	1	2	286	1,383	1,672
Mato Grosso.....	11	8	80	77	176
Goiás.....	1	14	2,598	35	2,648
Minas Gerais.....	25	124	28,016	3,041	31,206
TOTALS.....	336	410	49,088	9,876	59,710

(1) — Crude cane sugar in cakes.

## PRODUCTION OF SUGAR CANE

a) — Quantity

GEOGRAPHICAL ZONES AND FEDERATED UNITS		QUANTITY (tons)		
		Average 1929/1933	1936	1937
North.....	Territory of Acre.....	23,126	12,550	11,200
	Amazonas.....	8,820	9,470	8,360
	Pará.....	17,188	35,200	28,500
	Maranhão.....	67,946	50,700	46,880
	Piauí.....	71,478	36,700	34,000
	TOTALS.....	188,558	144,620	128,940
North-East.....	Ceará.....	655,930	287,800	262,500
	Rio Grande do Norte.....	170,678	288,700	212,000
	Paraíba.....	342,084	482,300	329,880
	Pernambuco.....	3,815,340	4,106,000	1,936,300
	Alagoas.....	1,490,862	1,637,700	1,028,000
	TOTALS.....	6,474,894	6,802,500	3,768,680
East.....	Sergipe.....	514,132	695,680	489,870
	Baía.....	1,981,936	1,126,600	1,283,000
	Espírito Santo.....	225,588	197,950	195,000
	TOTALS.....	2,721,656	2,020,230	1,967,870
South.....	Rio de Janeiro.....	1,365,788	3,621,200	3,208,400
	São Paulo.....	1,159,648	1,675,230	1,911,000
	Paraná.....	98,880	16,430	17,370
	Santa Catarina.....	125,898	150,380	278,280
	Rio Grande do Sul.....	1,158,740	540,000	550,500
	TOTALS.....	3,908,954	6,003,230	5,965,550
Central.....	Mato Grosso.....	46,734	19,900	77,400
	Goiás.....	369,520	248,000	228,140
	Minas Gerais.....	2,188,158	3,257,940	3,600,000
	TOTALS.....	2,604,412	3,525,840	3,905,540
BRAZIL.....		15,898,474	18,496,420	15,736,580



## PRODUCTION OF SUGAR CANE

b) — Value

GEOGRAPHICAL ZONES AND FEDERATED UNITS		VALUE (contos of réis)		
		Average 1929/1933	1936	1937
North.....	Territory of Acre.....	447	251	235
	Amazonas.....	172	189	176
	Pará.....	370	722	613
	Maranhão.....	1,361	1,090	1,055
	Piauí.....	1,444	807	799
	TOTALS.....	3,794	3,059	2,878
North-East.....	Ceará.....	13,391	6,476	5,906
	Rio Grande do Norte.....	3,458	6,063	4,770
	Paraíba.....	7,336	10,852	7,752
	Pernambuco.....	81,544	94,438	44,535
	Alagoas.....	30,350	40,124	25,186
	TOTALS.....	136,079	157,953	88,149
East.....	Sergipe.....	10,493	14,609	10,777
	Baía.....	42,924	24,222	27,585
	Espírito Santo.....	4,901	4,266	4,290
	TOTALS.....	58,318	43,087	42,652
South.....	Rio de Janeiro.....	30,730	90,530	96,251
	São Paulo.....	26,722	46,906	53,508
	Paraná.....	2,165	337	373
	Santa Catarina.....	2,714	3,083	5,844
	Rio Grande do Sul.....	25,290	12,420	16,515
	TOTALS.....	87,621	153,276	172,491
Central.....	Mato Grosso.....	961	488	1,941
	Goias.....	7,806	5,208	4,791
	Minas Gerais.....	50,720	65,159	76,600
	TOTALS.....	59,487	70,855	82,332
BRAZIL.....		345,299	428,230	388,502

Notes — The 1937 data is subject to rectification.

## PRODUCTION OF SUGAR

Quantity during the 1925-1938 period

CROPS	QUANTITY (60 kilo bags)			% ON TOTAL	
	Plants	Mills	Total	Plants	Mills
1925/26.....	5,282,071	7,207,291	12,489,362	42.3	57.7
1926/27.....	6,378,360	9,214,120	15,592,480	40.9	59.1
1927/28.....	6,992,551	6,876,882	13,869,433	50.4	49.6
1928/29.....	8,000,407	7,699,582	15,699,989	50.9	49.1
1929/30.....	10,804,034	8,797,238	19,601,272	55.1	44.9
1930/31.....	8,256,153	8,739,992	16,996,145	48.6	51.4
1931/32.....	9,156,948	7,968,331	17,125,279	53.4	46.6
1932/33.....	8,745,779	7,524,218	16,269,997	53.7	46.3
1933/34.....	9,049,590	7,552,510	16,602,100	54.5	45.5
1934/35.....	11,136,010	5,418,693	16,554,703	67.3	32.7
1935/36.....	11,841,087	6,081,839	17,922,926	66.1	33.9
1936/37.....	9,537,268	5,459,386	14,996,654	63.6	36.4
1937/38.....	10,907,204	5,835,508	16,742,712	65.1	34.9



**PRODUCTION OF SUGAR**  
Quantity and value according to origin

a) — Quantity

GEOGRAPHICAL ZONES AND FEDERATED UNITS		QUANTITY (60 kilo bags)		
		Average 1929/1933	1936	1937
North.....	Territory of Acre.....	19,272	10,464	9,313
	Amazonas.....	7,350	7,894	6,965
	Pará.....	15,623	32,126	25,203
	Maranhão.....	59,469	44,345	40,144
	Piauí.....	60,656	31,094	28,032
	TOTALS.....	162,370	125,923	109,657
North-East.....	Ceará.....	546,864	240,309	220,493
	Rio Grande do Norte.....	148,520	251,865	181,113
	Paraíba.....	350,479	464,656	311,586
	Pernambuco.....	4,848,396	4,224,191	3,065,655
	Alagoas.....	1,675,111	1,446,779	1,121,702
	TOTALS.....	7,569,370	6,627,800	4,900,549
East.....	Sergipe.....	629,190	811,676	607,448
	Baía.....	1,859,127	1,140,553	1,331,924
	Espírito Santo.....	200,120	176,362	172,548
	TOTALS.....	2,688,437	2,128,591	2,111,920
South.....	Rio de Janeiro.....	1,885,400	2,664,007	2,626,165
	São Paulo.....	1,657,043	2,479,815	2,733,122
	Paraná.....	82,400	13,685	14,471
	Santa Catarina.....	109,882	138,459	242,874
	Rio Grande do Sul.....	965,902	14,660	17,214
	TOTALS.....	4,700,627	5,310,626	5,633,846
Central.....	Mato Grosso.....	45,873	20,889	22,208
	Goiás.....	308,000	207,572	190,413
	Minas Gerais.....	1,891,092	2,564,786	2,697,920
	TOTALS.....	2,244,965	2,793,247	2,910,541
BRAZIL.....		17,365,769	16,986,187	15,666,513

b) — Value

GEOGRAPHICAL ZONES AND FEDERATED UNITS		VALUE (contos of réis)		
		Average 1929/1933	1936	1937
North.....	Territory of Acre.....	347	471	430
	Amazonas.....	138	355	334
	Pará.....	446	1,446	1,210
	Maranhão.....	1,167	1,862	1,806
	Piauí.....	1,204	1,455	1,379
	TOTALS.....	3,302	5,589	5,159

## PRODUCTION OF SUGAR

Quantity and value according to origin

b) — Value

GEOGRAPHICAL ZONES AND FEDERATED UNITS		VALUE (contos of réis)		
		Average 1929/1933	1936	1937
North-East.....	Ceará.....	9,655	10,814	10,187
	Rio Grande do Norte.....	2,606	10,578	8,150
	Paraíba.....	10,269	19,516	14,021
	Pernambuco.....	128,726	152,071	119,561
	Alagoas.....	41,166	49,480	41,727
	TOTALS.....	192,422	242,459	193,646
East.....	Sergipe.....	17,582	29,220	22,597
	Baía.....	51,285	47,903	55,941
	Espirito Santo.....	6,070	7,936	7,972
	TOTALS.....	74,937	85,059	86,510
South.....	Rio de Janeiro.....	61,921	108,691	118,177
	São Paulo.....	67,537	111,592	126,270
	Paraná.....	2,470	591	651
	Santa Catarina.....	3,337	4,154	8,015
	Rio Grande do Sul.....	37,649	680	795
	TOTALS.....	172,914	225,688	253,908
Central.....	Mato Grosso.....	1,277	1,065	1,343
	Goiás.....	6,647	9,341	8,569
	Minas Gerais.....	59,111	107,721	121,406
	TOTALS.....	67,035	118,127	131,318
BRAZIL.....		510,610	676,922	670,541

Note — The 1937 data is subject to rectification.

## PRODUCTION OF ALCOHOL

Quantity during the 1930-1938 period

CROPS	QUANTITY (litres)		
	Hydrated alcohol	Anhydrous alcohol	Total
1930/31.....	33,291,642	—	33,291,642
1931/32.....	37,357,959	—	27,357,959
1932/33.....	38,968,390	—	38,968,390
1933/34.....	43,336,288	100,000	43,436,288
1934/35.....	43,973,862	3,256,484	47,230,346
1935/36.....	54,228,552	7,810,058	62,038,610
1936/37.....	43,283,511	14,098,637	57,382,148
1937/38.....	43,244,835	20,616,770	63,861,605

Note — In the quantities of anhydrous alcohol given above, is not included the part having its origin in dis-hydration.

**PRODUCTION OF ALCOHOL**  
**Quantity and value according to origin**  
a) — Quantity

GEOGRAPHICAL ZONES AND FEDERATED UNITS		QUANTITY (litres)		
		Average 1929/1933	1936	1937
North.....	Territory of Acre.....	4,460	2,000	—
	Pará.....	83,890	23,580	30,600
	TOTALS.....	88,350	25,580	30,600
North-East.....	Paraíba.....	492,260	500,400	109,520
	Pernambuco.....	18,716,200	29,693,500	18,155,500
	Alagoas.....	3,704,380	3,665,300	4,714,650
	TOTALS.....	22,912,840	33,859,200	22,979,670
East.....	Sergipe.....	144,080	1,044,700	527,560
	Baía.....	1,901,070	30,100	37,910
	Espírito Santo.....	897,160	264,500	323,800
	TOTALS.....	2,942,310	1,339,300	889,270
South.....	Rio de Janeiro.....	15,855,520	13,798,500	15,975,000
	São Paulo.....	8,441,199	16,412,000	15,393,350
	Santa Catarina.....	105,200	642,100	763,550
	Rio Grande do Sul.....	142,202	54,400	82,330
	TOTALS.....	24,544,121	30,907,000	32,214,230
Central.....	Mato Grosso.....	178,780	285,500	287,780
	Goiaz.....	22,000	12,000	—
	Minas Gerais.....	822,940	2,741,900	2,744,850
	TOTALS.....	1,023,720	3,039,400	3,032,630
BRAZIL.....		51,511,341	69,170,480	59,146,400

## b) — Value

GEOGRAPHICAL ZONES AND FEDERATED UNITS		VALUE (contos of réis)		
		Average 1929/1933	1936	1937
North.....	Territory of Acre.....	3	2	—
	Pará.....	53	20	26
	TOTALS.....	56	22	26
North-East.....	Paraíba.....	196	400	88
	Pernambuco.....	6,309	19,301	11,801
	Alagoas.....	2,209	3,299	4,243
	TOTALS.....	8,714	23,000	16,132
East.....	Sergipe.....	93	940	475
	Baía.....	1,367	27	34
	Espírito Santo.....	714	225	275
	TOTALS.....	2,174	1,192	784

PRODUCTION OF ALCOHOL  
Quantity and value according to origin

b) — Value

GEOGRAPHICAL ZONES AND FEDERATED UNITS		VALUE (contos of réis)		
		Average 1929/1933	1936	1937
South.....	Rio de Janeiro.....	12,035	16,006	11,981
	São Paulo.....	6,397	12,309	11,545
	Santa Catarina.....	83	565	672
	Rio Grande do Sul.....	104	65	99
	TOTALS.....	18,619	28,945	24,297
Central.....	Mato Grosso.....	115	263	344
	Goiás.....	15	11	—
	Minas Gerais.....	606	2,742	2,745
	TOTALS.....	736	3,016	3,089
BRAZIL.....		30,299	56,175	44,328

Note — The 1937 data is subject to rectification.

PRODUCTION OF AGUARDENTE

a) — Quantity

GEOGRAPHICAL ZONES AND FEDERATED UNITS		QUANTITY (litres)		
		Average 1929/1933	1936	1937
North.....	Territory of Acre.....	82,400	75,000	85,000
	Amazonas.....	175,000	150,000	160,000
	Pará.....	1,279,300	1,200,000	1,300,000
	Maranhão.....	1,486,000	550,000	580,000
	Piauí.....	443,200	551,000	560,000
	TOTALS.....	3,465,900	2,526,000	2,685,000
North-East.....	Ceará.....	1,943,280	2,300,000	2,000,000
	Rio Grande do Norte.....	1,130,000	1,832,000	1,800,000
	Paraíba.....	1,620,140	1,300,000	1,250,000
	Pernambuco.....	5,973,600	4,000,000	2,000,000
	Alagoas.....	2,801,660	3,200,000	2,800,000
	TOTALS.....	13,468,680	12,632,000	9,850,000
East.....	Sergipe.....	5,412,000	3,000,000	3,500,000
	Baía.....	4,920,800	4,500,000	4,800,000
	Espírito Santo.....	2,376,000	6,000,000	6,200,000
	TOTALS.....	12,708,800	13,500,000	14,500,000
South.....	Rio de Janeiro.....	16,000,000	22,748,500	30,190,100
	São Paulo.....	42,597,492	33,296,000	40,000,000
	Paraná.....	5,000,000	5,600,000	6,000,000
	Santa Catarina.....	4,161,600	3,000,000	3,200,000
	Rio Grande do Sul.....	4,668,000	6,000,000	6,200,000
	TOTALS.....	72,427,092	70,644,500	85,590,100
Central.....	Mato Grosso.....	969,760	700,000	1,242,900
	Goiás.....	845,390	600,000	650,000
	Minas Gerais.....	16,611,100	19,561,200	18,000,000
	TOTALS.....	18,426,250	20,861,200	19,892,900
BRAZIL.....		120,496,722	120,165,700	132,518,000



## PRODUCTION OF AGUARDENTE

b) — Value

GEOGRAPHICAL ZONES AND FEDERATED UNITS		VALUE (contos of réis)		
		Average 1929/1933	1936	1937
North	Territory of Acre.....	33	64	77
	Amazonas.....	71	128	144
	Pará.....	471	1,020	1,170
	Maranhão.....	519	468	522
	Piauí.....	166	551	616
	TOTALS.....	1,260	2,231	2,529
North-East	Ceará.....	751	2,185	2,000
	Rio Grande do Norte.....	434	1,832	1,980
	Paraíba.....	459	1,235	1,250
	Pernambuco.....	1,519	3,600	1,800
	Alagoas.....	834	2,560	2,380
	TOTALS.....	3,997	11,412	9,410
East	Sergipe.....	1,761	2,100	2,625
	Baía.....	2,012	3,600	4,080
	Espírito Santo.....	1,193	6,000	6,200
	TOTALS.....	4,966	11,700	12,905
South	Rio de Janeiro.....	8,000	18,199	26,265
	São Paulo.....	21,503	26,637	34,000
	Paraná.....	2,400	5,040	6,000
	Santa Catarina.....	2,140	2,100	2,400
	Rio Grande do Sul.....	2,334	5,400	5,580
	TOTALS.....	36,377	57,376	74,245
Central	Mato Grosso.....	358	700	1,216
	Goiaz.....	320	540	585
	Minas Gerais.....	7,789	13,469	12,600
	TOTALS.....	8,467	14,709	14,401
BRAZIL.....		55,067	97,428	113,490

Note — The 1937 data is subject to rectification.

## EXPORTATION OF SUGAR

Quantity and value during the 1928—1937 period

YEARS	Quantity (in 60 kilo bags)	VALUE	
		In contos of réis	In pounds sterling
1928.....	500,622	20,831	510,581
1929.....	247,957	9,028	221,538
1930.....	1,407,602	25,219	576,566
1931.....	184,937	4,628	61,864
1932.....	674,315	19,174	295,192
1933.....	424,500	12,552	174,418
1934.....	398,280	14,284	147,913
1935.....	1,448,197	46,661	369,291
1936.....	1,380,466	40,172	314,746
1937.....	4,969	315	2,488

## EXPORTATION OF SUGAR

Quantity according to destination during the 1928—1937 period

COUNTRIES	QUANTITY (in 60 kilo bags)									
	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
Argentina.....	16	7,222	13,006	2,136	2,020	1,437	2,200	2,707	2,471	193
Belgo - Luxemburg Union.....	36,795	1	71,610	3,385	—	—	—	—	—	—
Bolivia.....	152	95	71	—	—	434	1,740	140	701	292
Colombia.....	—	—	—	—	—	—	—	206	1,214	1,276
France.....	7,022	36,529	36,899	11	8	—	—	10	—	—
Germany.....	6,000	6	1	1	4,700	—	—	—	—	—
Great Britain.....	303,778	128,314	1,246,398	165,110	590,716	413,148	391,550	1,187,923	1,369,614	—
Italy.....	2	—	3	3	—	—	—	461	156	—
Netherlands.....	97,384	—	8,466	—	—	—	—	—	—	—
Peru.....	68	—	4	—	248	337	—	15	—	—
Portugal.....	7,434	143	6,274	810	2,204	24	10	16	2,110	3
Spain.....	—	—	—	—	—	—	—	—	—	5
United States.....	—	2	—	—	—	—	—	—	—	—
Uruguay.....	41,971	75,645	24,870	13,481	74,419	9,120	2,780	256,719	4,200	3,200
TOTALS.....	500,622	247,957	1,407,602	184,937	674,315	424,500	398,280	1,448,197	1,380,466	4,969

## TEA

THE States of Minas Gerais, São Paulo, Paraná, Santa Catarina and Rio Grande do Sul, offer all the conditions necessary for tea planting, a profitable industry owing to the fact that this beverage finds a ready sale throughout the world. Tea planting was attempted for the first time in the Municipality of Ouro Preto, State of Minas Gerais, in 1825, but the experiment was not continued, although the plant showed that it had perfectly adapted itself to its new surroundings. The creation, in 1920, of the "Instituto Barão de Camargo" (Baron de Camargo Institute), an institution whose aim is to promote and develop tea planting in Brazil, gave new life to the plantations and enabled the planters to enjoy a period of frank prosperity. There are at the present time in the State of Minas Gerais, principally in the Municipality of Ouro Preto, magnificent tea plantations having more than a million trees and an annual production of about 17,000,000 kilos. Along the coast of the State of São Paulo there are also prosperous tea plantations, whose produce has always found a very favorable market. The tea leaves are picked, in Brazil, after the trees have been planted for a little more than three years.

## IMPORTATION OF TEA

Quantity and value during the 1927-1937 period

YEARS	Quantity (kilos)	VALUE	
		In milréis	Equivalent in pounds sterling
1927.....	245,213	2,774,115	82,157
1928.....	249,665	3,520,155	85,695
1929.....	277,726	3,634,177	89,172
1930.....	198,042	3,818,967	93,808
1931.....	138,585	3,060,673	70,265
1932.....	147,052	2,704,668	43,670
1933.....	164,959	2,160,364	30,354
1934.....	149,208	2,501,921	32,993
1935.....	87,363	3,037,279	30,624
1936.....	81,321	2,173,207	15,354
1937.....	91,661	2,370,905	18,136

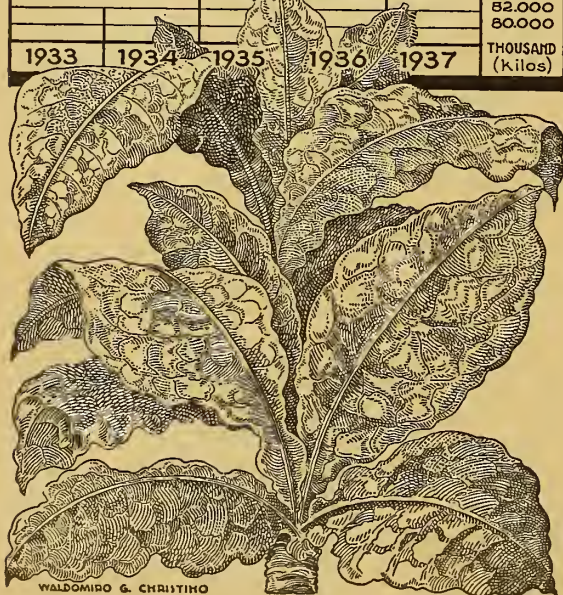
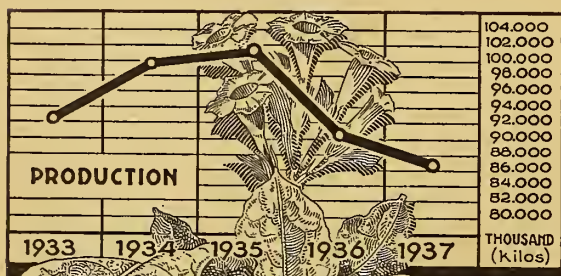
## IMPORTATION OF TEA

Quantity and value, according to origin in 1937

COUNTRIES OF ORIGIN	Quantity (kilos)	Value (milréis)
Argentina.....	166	3,364
Canada.....	756	28,332
France.....	25	158
Germany.....	1,571	25,965
Great Britain.....	79,808	2,039,085
Japan.....	800	33,040
Netherlands.....	8,061	230,966
Portugal.....	412	6,584
United States.....	62	3,411
TOTALS.....	91,661	2,370,905

## TOBACCO

THE tobacco plant had its origin in America, from whence it was taken to Europe. Before the discovery of the New World the Indians used to grow tobacco on a large scale. Nowadays tobacco is an important factor in Brazilian economics, its importance being so great that,



just like coffee, it figures on the National Coat-of-Arms. As regards production, our country occupies fourth place on the list of the world's tobacco growing countries. Tobacco planting is developing on an ever increasing scale in Brazil, the excellent produce of the plantations being so abundant and finding such a ready sale abroad that, even after attending to the requirements of the home market, which is no small matter, — tobacco occupies the 4th place on our general exportation list. Baía, Rio Grande do Sul and Minas Gerais are the States which possess the largest plantations and produce the best qualities of Brazilian tobacco.

Brazilian tobacco is mainly exported in the leaf, in bales of 75 kilos. Baía, which is the greatest to-



bacco growing State, produces three distinct types of tobacco: 1st. — “fumo leve” or “das matas” (light or wild woodland region) tobacco; 2nd — “fumo pesado” or “forte” (heavy or strong tobacco); 3rd — “fumo fraco” (mild tobacco).

For the purpose of simultaneously improving the already high quality of Baía tobacco and increasing the production of the plantations, the State Government created the “Instituto Baiano do Fumo” (Bahian Tobacco Institute), which will, in the development of this source of wealth, exercise a function identical to that of the highly important rôle played by the “Instituto do Cacáu” (Cocoa Institute of Baía), as regards the cocoa industry.

Brazilian cigars and cigarettes are always in great demand, owing to their excellent qualities, on Foreign markets, on many of which our brands are winning relative preference.

We are now planting on a larger scale tobacco specially intended for “Virginia” and “Chinese” type cigarettes. “Sumatra” type tobacco, for cigar making, has also been found worthy of the attention of our planters.

Most of the plantations producing cigarette tobacco, in Brazil, are to be found in the South of the country. The State of Baía produces, principally, cigar tobacco.

The finest qualities of leaf are used for making the world famous “Bahia Cigars”, which in their attractive “de luxe” boxes are encountered wherever the most exigent cigar smokers foregather, throughout the world.

Pipe smokers are also very well cared for in Brazil, especially in Rio de Janeiro, where various important companies, both National and Foreign, produce pipe tobacco of the very finest quality. It is only fair to grant special mention, among said brands of pipe tobacco, to those known locally as “Mistura Britânica” (British Mixture) and “Mistura Inglesa” (English Mixture).

There are also special brands of cigarettes in straw wrappers which, for a long time past have enjoyed the preference of all those who have accustomed themselves to same, in London, New York and other large Cities throughout the world.

As regards the planting of “Virginia” tobacco, in Brazil, there is quite a romance attached to same. This brand of tobacco was first brought to Brazil, in the old Empire days, by the Southern families who emigrated to our shores on the termination of the American Civil War, some of them settling in the North and some in the South of our Great Country.

Along the Amazon, that giant among the rivers of the world, and even in the far interior of the immense region denominated Brazilian Guiana, which is so vast that it constitutes, so to speak, a new world, opulent in natural resources to an untold degree,— said families settled and produced a brand of “Virginia” tobacco which deservedly won for itself the preference of those who usually smoke this type of cigarette.

Not all of these planters settled in the North of Brazil. Some of them came down to our Southern States, principally the State of São Paulo, where, at Villa Americana, they did very good development work indeed, in general, particularly producing on their splendidly equipped plantations, “Virginia” type cigarette tobacco of a brand which left nothing to be desired by any smoker whatsoever.

The total Brazilian production of Tobacco in the last five years has been distributed as follows, according to the quantity of kilos: 1933 — 92,318,000; 1934 — 99,540,000; 1935 — 101,814,700; 1936 — 90,864,820; 1937 — 87,995,850.



## PRODUCTION OF TOBACCO

a) — Quantity

GEOGRAPHICAL ZONES AND FEDERATED UNITS		Quantity (kilos)		
		Average 1929/1933	1938	1937
North.....	Territory of Acre.....	301,400	300,000	290,000
	Amazonas.....	284,400	350,000	355,000
	Pará.....	765,800	750,000	800,000
	Maranhão.....	345,700	300,000	380,000
	Piauí.....	347,800	448,000	450,000
	TOTALS.....	2,025,100	2,148,000	2,275,000
North-East.....	Ceará.....	1,730,927	1,750,000	1,650,000
	Rio Grande do Norte.....	76,000	12,720	12,000
	Paraíba.....	2,595,800	2,000,000	2,200,000
	Pernambuco.....	2,795,800	2,800,000	2,400,000
	Alagoas.....	1,027,980	1,200,000	1,250,000
	TOTALS.....	8,226,507	7,762,720	7,512,000
East.....	Sergipe.....	1,332,000	750,000	800,000
	Bahia.....	30,517,705	28,113,800	27,484,650
	Espírito Santo.....	86,400	300,000	330,000
	TOTALS.....	31,936,105	29,163,800	28,614,650
South.....	Rio de Janeiro.....	301,000	175,800	240,200
	São Paulo.....	2,454,236	1,911,900	2,800,000
	Paraná.....	1,348,200	1,500,000	1,600,000
	Santa Catarina.....	2,869,400	2,800,000	2,900,000
	Rio Grande do Sul.....	30,084,800	33,650,000	25,000,000
	TOTALS.....	37,057,636	40,037,700	32,540,200
Central.....	Mato Grosso.....	303,300	220,000	504,000
	Goiás.....	1,274,600	1,500,000	1,550,000
	Minas Gerais.....	15,612,960	10,032,600	14,000,000
	TOTALS.....	17,191,360	11,752,600	16,054,000
BRAZIL.....		96,436,708	90,864,820	86,995,850

b) — Value

GEOGRAPHICAL ZONES AND FEDERATED UNITS		Value (contos of réis)		
		Average 1929/1933	1938	1937
North.....	Territory of Acre.....	478	690	696
	Amazonas.....	418	875	888
	Pará.....	1,170	1,875	2,000
	Maranhão.....	521	750	950
	Piauí.....	568	986	1,035
	TOTALS.....	3,155	5,176	5,569
North-East.....	Ceará.....	2,784	4,375	4,125
	Rio Grande do Norte.....	110	33	31
	Paraíba.....	3,265	5,400	5,940
	Pernambuco.....	2,061	5,040	4,800
	Alagoas.....	1,644	3,000	3,125
	TOTALS.....	9,864	17,848	18,021

## PRODUCTION OF TOBACCO

b) — Value

GEOGRAPHICAL ZONES AND FEDERATED UNITS		Value (contos of réls)		
		Average 1929/1933	1936	1937
East.....	Sergipe.....	1,326	1,350	1,600
	Baía.....	51,405	42,171	43,975
	Espírito Santo.....	130	600	693
	TOTALS.....	52,861	44,121	46,268
South.....	Rio de Janeiro.....	1,046	703	937
	São Paulo.....	9,776	6,692	9,800
	Paraná.....	5,068	5,250	5,600
	Santa Catarina.....	4,926	5,040	5,800
	Rio Grande do Sul.....	48,948	53,840	41,253
	TOTALS.....	69,764	71,525	63,390
Central.....	Mato Grosso.....	459	418	1,142
	Goiás.....	3,694	4,500	4,805
	Minas Gerais.....	34,536	35,124	49,000
	TOTALS.....	38,689	40,042	54,947
BRAZIL.....		174,333	178,712	188,195

## EXPORTATION OF TOBACCO LEAF

Quantity and value during the 1926-1937 period

YEARS	Quantity (kilos)	VALUE	
		in mlrêls	Equivalent In pounds sterling
1926.....	27,969	66,669,000	1,985,605
1927.....	31,969	71,806,000	1,746,716
1928.....	29,687	70,791,000	1,736,895
1929.....	30,952	67,301,000	1,653,360
1930.....	37,869	74,846,000	1,699,775
1931.....	38,255	66,407,000	956,000
1932.....	27,006	39,494,000	585,000
1933.....	20,097	29,784,000	379,000
1934.....	31,141	52,208,000	527,000
1935.....	32,963	65,372,000	518,000
1936.....	31,000,515	65,038,441	521,049
1937.....	36,249,632	86,761,001	724,118

Quantity and value, according to destination in 1937

DESTINATION	Quantity (kilos)	Value (mlrêls)
Algolia.....	1,165,492	2,429,861
Argentina.....	5,270,419	12,325,061
Belgo-Luxemburg Union.....	1,038,613	2,250,926
Casablanca.....	48,578	103,316
Denmark.....	11,258	28,145
France.....	1,596,037	3,834,278
Germany.....	15,153,853	37,503,305
Great Britain.....	68,599	117,660
Italy.....	73,723	191,554
Netherlands.....	9,911,444	23,184,455
Spain.....	500,000	1,342,500
Sweden.....	437,581	1,240,879
Uruguay.....	974,025	2,209,061
TOTALS.....	36,249,632	86,761,001

## VITICULTURE

**V**ITICULTURE will be one of our great National sources of wealth. The whole Southern region of Brazil is very suitable for the cultivation of the vine. Our country produces more than 70,000,000 litres of wine per annum. Various oenological stations co-operate with the vine growers so as to improve more and more all the time the different varieties of European grapes grown in Brazil and, simultaneously, the good qualities of Brazilian wines. The States of São Paulo, Rio Grande do Sul and Minas Gerais do all they can to aid the wine industry. The State of São Paulo alone has almost seven million vines producing 18,252,000 kilos of grapes per annum.

### PRODUCTION OF WINE

#### a) — Quantity

GEOGRAPHICAL ZONES AND FEDERATED UNITS		QUANTITY (litres)		
		Average 1929/1933	1936	1937
North-East.....	Ceará.....	40,389	15,000	10,000
	TOTALS.....	40,389	15,000	10,000
South.....	São Paulo.....	3,475,690	4,887,000	6,000,000
	Paraná.....	678,257	530,000	600,000
	Santa Catarina.....	853,380	1,500,000	2,100,000
	Rio Grande do Sul.....	66,700,000	75,000,000	65,000,000
	TOTALS.....	71,707,327	81,917,000	73,700,000
Central.....	Minas Gerais.....	1,670,369	3,825,400	3,650,000
	TOTALS.....	1,670,369	3,825,400	3,650,000
Sundry vineyards.....		437,999	—	—
BRAZIL.....		73,856,084	85,757,400	77,360,000

#### b) — Value

GEOGRAPHICAL ZONES AND FEDERATED UNITS		VALUE (contos of réis)		
		Average 1929/1933	1936	1937
North-East.....	Ceará.....	42	18	12
	TOTALS.....	42	18	12
South.....	São Paulo.....	5,213	7,331	9,000
	Paraná.....	738	636	720
	Santa Catarina.....	871	1,500	2,100
	Rio Grande do Sul.....	44,773	60,000	52,000
	TOTALS.....	51,595	69,467	63,820
Central.....	Minas Gerais.....	1,769	5,679	5,475
	TOTALS.....	1,769	5,679	5,475
Sundry vineyards.....		449	—	—
BRAZIL.....		53,855	75,164	69,307

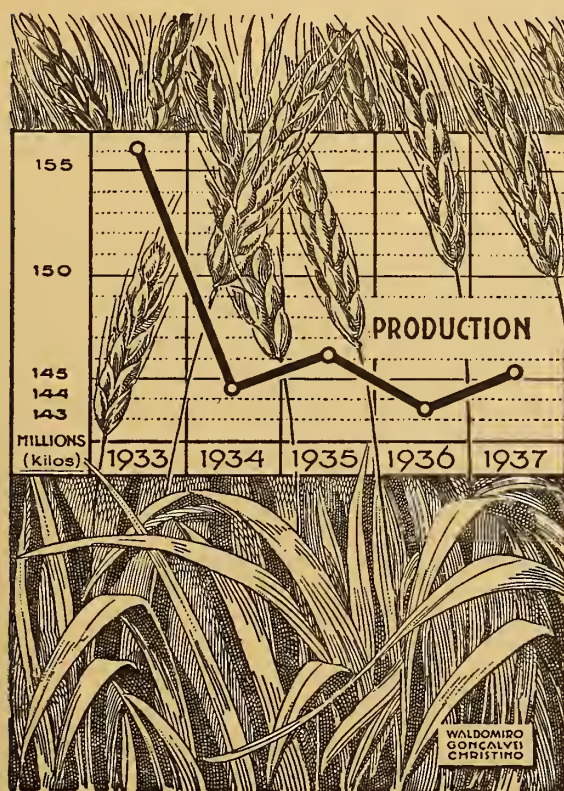
Note — The 1937 data is subject to rectification.



## WHEAT

IN the civilized world, wheat is the most useful and the principal cereal. It is found all over the world and grows wherever the soil is not too cold, damp or hot. As far as Brazil is concerned, the wheat problem is one of the most outstanding ones in the National economy. In 1936 alone, our

country spent 1,817 contos of reis *per diem* in the purchase of wheat! The huge quantity of wheat imported, increasing more and more all the time, and reducing our financial resources, obliged the Government to seriously occupy itself with the wheat problem and to make every effort to develop the production of this cereal in our territory. In the old days we used to grow wheat with excellent results and we even reached the point of exporting same, principally to Argentina and Uruguay. Said fact demonstrates our wheat growing possibilities and permits us to hope that at least in part, we will be able, in the near future, to alleviate the wheat importation burden, by increasing the area given over to the cultivation of wheat in Brazil. In order to encourage the cultivation of wheat, the Ministry of Agriculture bought 1,084,000 kilos of wheat seeds and



distributed same among the farmers in the States of Rio Grande do Sul, Santa Catarina, Paraná, São Paulo, Goiaz, Mato Grosso, Minas Gerais, Estadodo Rio de Janeiro, Espírito Santo, Baía, Alagôas and Pernambuco.

One of the greatest preoccupations of the Brazilian Government is to, in every way and by all possible means, regulate aforesaid agricultural exploitation on economic bases, so that, on attaining its maximum development, it will be able to live independently of any official protection whatever.

In the States of Rio Grande do Sul and Paraná there are Experimental Stations putting forth every effort to fix the types of seeds capable of resisting disease and so make compensating harvests possible. Other experimental stations and numerous wheat seed multiplication fields have been created to intensify the development of this branch of farming which flourished in Old Colonial Brazil.

Wheat growing has, of late, had the area under cultivation considerably increased, thanks to the patriotic campaign which the Government is doing



its very best to bring to a successful issue, so as to reduce the importation of wheat, which costs us almost 700,000 contos of réis per annum.

By the Brazilian Government there was issued, in December 1938, a Decree-Law in virtue of which the acquisition and use of National wheat was made obligatory for all the milling concerns then existing or which afterwards came into existence, in the country.

It was also made obligatory for said concerns to mix with National wheat the substitute adopted by the "Serviço de Fiscalização do Comércio de Farinhas" (Flour Trade Supervision Service), in the same proportion as that established for Foreign wheat.

For the effect of the distribution of quotas, proportional to the real production capacity of each mill (having in view the average of its quinquennial production) and, moreover, the total amount of wheat grown in the country, — there shall be compiled, every year, the full statistics of the Brazilian flour milling industry.

The same Decree-Law fixed at 600 (six hundred) réis, for the term of 3 (three) years, the minimum price for the acquisition, per kilo, of National wheat, in bags, for milling purposes, said price being subject to alteration, on the expiration of said term, at the criterion of the Government, pursuant to the circumstances to be taken into account. Aforesaid price shall be, obligatorily, paid by the millers at the place of shipment of above mentioned product.

All infractions of the Decree-Law hereinbefore mentioned will be punished with fines varying between ten and fifty contos of réis.

A second offence will be punished with the penalty of cancellation of transgressor's commercial registration and that of the permits to do business which have been granted to him.

If the transgressor is corporation, then its licence to function shall be cancelled.

## PRODUCTION OF WHEAT

a) — Quantity

GEOGRAPHICAL ZONES AND FEDERATED UNITS		QUANTITY (kilos)		
		Average 1929/1933	1936	1937
East.....	Baía.....	5,600	4,000	3,800
	TOTALS.....	5,600	4,000	3,800
South.....	Paraná.....	21,067,277	20,000,000	25,000,000
	Santa Catarina.....	3,725,000	4,900,000	5,000,000
	Rio Grande do Sul.....	128,731,000	118,650,000	115,200,000
	TOTALS.....	153,523,277	143,550,000	145,200,000
Central.....	Minas Gerais.....	—	—	15,000
	TOTALS.....	—	—	15,000
BRAZIL.....		153,523,277	143,554,000	145,218,800

Note — The 1937 data is subject to rectification.

# PRODUCTION OF WHEAT

b) — Value

GEOGRAPHICAL ZONES AND FEDERATED UNITS		VALUE (contos of réls)		
		Average 1929/1933	1936	1937
East.....	Baía.....	3	2	2
	TOTALS.....	3	2	2
South.....	Paraná.....	8,013	6,600	10,000
	Santa Catarina.....	1,505	1,617	2,000
	Rio Grande do Sul.....	57,655	41,528	57,600
	TOTALS.....	67,173	49,745	69,600
Central.....	Minas Gerais.....	—	—	8
	TOTALS.....	—	—	8
BRAZIL.....		67,176	49,747	69,610

Note — The 1937 data is subject to rectification.

# IMPORTATION OF WHEAT

Quantity and value during the 1826-1937 period

YEARS	Quantity (kilos)	VALUE	
		In milrêls	Equivalent in pounds sterling

a) — Flour

1926.....	221,356,312	151,599,550	4,478,157
1927.....	204,167,390	147,149,814	3,581,017
1928.....	209,156,992	136,764,394	3,355,891
1929.....	162,877,913	92,141,502	2,446,826
1930.....	152,279,361	99,601,353	2,109,142
1931.....	61,306,549	36,412,125	592,710
1932.....	5,013,460	3,049,290	44,590
1933.....	48,604,740	25,588,560	306,523
1934.....	98,653,637	50,098,788	506,919
1935.....	45,429,000	31,341,000	226,000
1936.....	50,813,000	46,203,701	324,582
1937.....	41,307,000	40,260,000	309,000

b) — Grain

1926.....	542,657,982	255,988,204	7,569,363
1927.....	595,536,938	297,188,786	7,231,628
1928.....	695,407,164	319,890,974	7,849,126
1929.....	746,197,877	311,207,177	7,644,909
1930.....	648,239,519	264,979,741	6,068,545
1931.....	795,893,005	283,760,915	4,180,809
1932.....	772,378,294	253,419,374	3,605,935
1933.....	850,055,582	256,218,534	3,318,014
1934.....	809,842,714	256,466,941	2,606,582
1935.....	881,722,000	434,463,000	3,067,000
1936.....	919,860,000	617,075,000	4,347,000
1937.....	930,818,000	668,359,000	5,139,000

## IMPORTATION OF WHEAT

Percentage of Wheat in total value of Brazilian importation  
during the 1926-1937 period

YEARS	VALUE (contos of réis)		Percentage
	Total Imports	Imports of Wheat	
1926.....	2,705,553	407,587	15.0
1927.....	3,273,163	444,338	13.5
1928.....	3,694,990	456,655	12.3
1929.....	3,527,738	410,808	11.6
1930.....	2,343,705	357,121	15.2
1931.....	1,880,934	320,173	17.0
1932.....	1,518,694	256,468	16.8
1933.....	2,165,254	281,807	13.0
1934.....	2,502,785	306,565	12.2
1935.....	3,855,917	465,304	12.0
1936.....	4,268,667	663,279	15.5
1937.....	5,314,551	708,619	13.3

*LIVE-STOCK*





## INTRODUCTORY

THE general features of the country afford natural conditions particularly suited for pastoral purposes. Extensive grazing areas are rendered highly productive and absolutely utilized for stock-raising in broad scale. The geographical position and diversified topography from north to south determine marked variations in climate, but the country as a whole is led to a most favourable reputation for its valleys and fertile plains which provide excellent areas for the growth of grass and consequent development of cattle-breeding. Lowlands and highlands mingle with mountains and form peculiar landscapes, distinct in outline and elevation, where rivers play their part in contributing for the higher yield of the special soils on which grow the pasture and crops. These and the large beautiful prairies are of great economic importance for the valuable extensions made available to herds of different stocks.

Soil and climate divide the country into zones, some great, others small, but all of them clearly outlined and each one having its own characteristics, such as : temperature, pluviometric precipitation, vegetation and topography. In this way Brazil possesses regions appropriate for the most varied kinds of cattle. If some of them, owing to their soil, climate or topography, do not, perchance, permit the breeding of the less hardy species, there are others which are very similar to the region of the country of origin of said species, being conducive, not only to the successful breeding of same, but also to the planting of the forage which grows in the region from whence aforesaid cattle was imported.

Thus Foreign live-stock will always find somewhere to develop in Brazil.

Until quite recently the herds were constituted by the survivors of the animals brought over in Colonial days and which gradually produced different types, in accordance with the breeding procedure peculiar to each region. Nowadays said herds are noticeably improved through the importation of thoroughbreds for breeding purposes, there being zones, great in extent, where the above mentioned survivors of the Colonial Era have completely disappeared, leaving in their place the improved breeds. In addition to private initiative, the Ministry of Agriculture has imported from abroad a large number of pedigree breeders, for its experimental grazing farms and to loan to ranchers.

The bovine and equine branches of live-stock are those which have shown the greatest increase in numbers. The selection of breeds, whether National, such as the Caracú, Curraleira, Mangalarga, Nordestina, Pêga and Crioula Gaúcha, or exotic, among which one must mention the Durham, Polled Angus, Hereford, Dutch, Swiss, Jersey and Normand, in the bovine branch, the En-

glish, Arab, Anglo-Arab and Percheron, in the equine branch, and the Catalan, Italian and Poitou breeds of asses have made more progress during the last eight years than they had done for the previous thirty.

The uniting of the ranchers in associations entrusted with the registration of the pedigrees of their animals, as occurred with the owners of the Dutch, Jersey, Swiss, Mangalarga, Caracú and Crioula breeds, and above all, the genealogical registration of the East Indian bovine breeds, have contributed towards the selection of the pedigree breeders to be used, and for the furnishing of reliable data to studious people interested in pedigree stock. In the old days said data only reached a limited number of progressive ranchers.

Said foregathering of cattle breeders is an act of progress which finds its justification, not only in above mentioned enlargement of the divulgation of data, but also in the technical and educational assistance granted by the Federal Ministry of Agriculture and by the Agricultural Departments of the States of the Union, all of which now try to constitute their official staffs exclusively with veterinary surgeons and agricultural engineering experts.

The herds of Brazilian bovine cattle, numbering forty million head, more or less, has, on general lines, the following distribution :

From the North of the country down to Baía (Bahia) and the Northern part of the State of Minas Gerais, the herds are made up of National stock, with East Indian pedigree breeders, very few of them belonging to milk producing breeds, while prize bulls for the herds intended for slaughterhouse purposes are almost completely non-existent. On Marajó Island cross-breeding of National with Swiss and Charolese cattle has already been started. In the State of Ceará there are experimental ranches to start the breeding of Dutch herds. In the States of Minas Gerais, Goiaz and Mato Grosso, there are East Indian herds with thoroughbred bulls of the same breed and small ranches with pedigree bulls, including Charolese and Polled Angus. In the State of Minas Gerais there are also a few herds of milk producing cows, principally along the tracks of the "Estrada de Ferro Central do Brasil" (Central of Brazil Railway) and in the South of the State, the Dutch breed predominating. In the State of Rio de Janeiro one finds Zebú cattle crossed with milk producing breeds, there also being encountered Dutch, Swiss and Jersey thoroughbred bulls. Some of the farmers breed Zebú bulls for sale to others who wish to increase their stock. In the State of São Paulo there are Zebú and Caracú herds, with paralleled selection, there being various ranches intended to give a start to the breeding of milk producing and mixed breeds, such as Swiss, Dutch, Jersey and Normand. Some of the ranches specialize in the Caracú breed. In the States of Paraná and Santa Catarina there are to be found National crossbreeds and a few East Indian herds and thoroughbred bulls of milk producing breeds. In the State of Rio Grande do Sul one encounters carefully selected herds of cattle intended for slaughterhouse purposes, with pedigree Durham, Hereford, Polled Angus, Devon and Charolese bulls. In the Northern part of the State on finds a few herds of Zebú, a small number of herds of Swiss, Red Polled and Normand cattle, Dutch stock being bred on a large scale.

As to the equine branch of livestock, National breed herds are to be found from the State of Maranhão down to the Northern part of the State of Minas Gerais, this breed having originated through careful breeding of the North-Eastern horse, descendent of the Barbary-Arabian. In the State of Pernambuco there is a ranch specializing in pedigree race horses. In the States of Minas Gerais and São Paulo the Mangalarga and Campolina breeds are very carefully selected, there being also breeders of English racing and riding horses. In the States of Paraná and Santa Catarina the National horse predominates,



there being but few riding stations with Foreign breeds. In the State of Rio Grande do Sul, the equine stock denominated Crioulo Riograndense is very carefully bred while Arabian stock and animals intended for traction, military and racing purposes, are produced on a large scale.

Great attention is paid to the breeding of asses and mules, principally in the States of Minas Gerais and São Paulo, where a large number of breeders specialize in the improvement of National breeds, such as Paulista, Pêga and Lagôa Dourada. Said animals are not only very hardy indeed, but, as regards beauty of form, are in no way whatsoever inferior to their brothers from overseas. From Baía to Ceará, National breeds are different from those in the Southern part of the country, there abounding the little donkeys called Jericos, which are very useful to a certain section of the population of the Northern States, being splendid animals of burden and exceedingly economical. Foreign breeds have been frequently imported and very easily adapted to the different regions of the country. Poitou, Catalan and Italian breeds have been the ones preferred and there are ranches where the breeding of said pure blooded stock has been started. On Marajó Island we have Catalan stock, both bred pure and cross-bred with National equine stock, thus producing splendid mules. In the States of Baía and Minas Gerais, the Catalan breed has greatly aided the improvement of National breeds.

The breeding of Italian asses has been carefully attended to in the State of São Paulo, where admirable specimens are to be found. Poitou stock is bred with great success in the extreme South of the country, this also being true as regards some of the Northern States.

Sheep breeding is principally concentrated in the State of Rio Grande do Sul, which owing to its climate and good pasture lands, is the one that offers the best conditions for this purpose. The North of the country recently received specimens of Bergamasca sheep through the initiative of the Ministry of Agriculture. This breed, which is of African origin, produces but little wool, but has adapted itself quite well to our hot regions. In the State of Minas Gerais, Romney Marsh sheep and cross-breeds of same are bred with relative success in adequate pastures.

In the North-East there is already a large number of goats of National breed. They are hardy animals and furnish meat and skins, but very little milk. Alpine and Spanish breeds do not get very well acclimatized in the North-East. From São Paulo to the South we principally find Togenburg flocks. Nubian goats have been cross-bred with Northern Brazil ones, complete success crowning the experiment. Recently Angora goats have been imported from the Argentine and the United States so as to attempt the breeding of same in the North of the country, where sheep do not produce wool.

In certain localities pigs have the privilege of constituting the basis of human alimentation. Minas Gerais produces this branch of live-stock on a very large scale, being in fact the principal breeding State in the Union. From the North, down to the State of Espírito Santo, very little is done in this line. Through the natural selection of various types, there originated the Canastra, Pereira, Nilo, Macau, Piaú and Caruncho breeds. Said National breeds are fat producers. Duroc Jersey, Poland China, Large Black, Large White, Berkshire and finally Hampshire breeds have been imported for the purpose of improving the stock, making same a better meat producer, so as to be exported by the slaughterhouse and refrigerating plants.

Poultry, which up to quite recently represented nothing in the National economy, now figures in an auspicious manner on the list of animal products



exported by the country. The egg industry, during the last five years, has been found worthy of the attention of the small farmer. Uniting their efforts in co-operative societies, said enterprising poultry farmers in the States of São Paulo, Rio de Janeiro, and in the Federal District, have caused eggs produced in Brazil to be placed on the London markets. Almost all of the eggs exported are White Leghorn, being followed by Rhode Island Red. The States of Pernambuco, Bahia and Rio Grande do Sul possess large poultry farms, but not as yet, in number sufficient for the exportation of eggs. The steps taken by the Ministry of Agriculture, during the current year, in connection with the construction of the Egg Depot and the acquisition of incubators for 37,000 eggs, enable one to foresee that in the near future poultry farming will enter into a period of great prosperity.

### FEDERAL CONTROLLING ORGANS

Stock breeding, in Brazil, and all matters connected with same, are governed by the "Departamento Nacional de Produção Animal" (National Department of Animal Production), which has the following attributions:

a) — to guide and promote the development of stock breeding and allied industries; b) — to supervise the exercise of the veterinary profession; c) — to supervise the preparation of products of animal origin and inter-State and International Commerce connected therewith; d) to supervise the sale of drugs and other pharmaceutical, chemical and biological products intended for veterinary use; e) — to take measures for the maintenance of perfect sanitary conditions for the flocks and herds; f) — to promote by all the means in its power, the protection of the National fauna by means of the technical organs subordinate to the Department and of the entities or services under its immediate direction.

The following are the Department's technical organs:

1) — "Instituto de Biologia Animal" (Institute of Animal Biology); 2) — "Serviço de Fomento da Produção Animal" (Service for the Promotion of Animal Production, *i. e.*, the National stock breeding promotion service); 3) — "Serviço de Defesa Sanitária Animal" (Animal Sanitary Defence Service,—the organization charged with the maintenance of perfect sanitary living conditions for the flocks and herds); 4) — "Serviço de Inspeção de Produtos de Origem Animal" (Service for the Inspection of Products of Animal Origin); 5) — "Serviço de Caça e Pesca" (Hunting and Fishing Service — the organization entrusted with the supervision of all matters relating to hunting and on which falls the duty of superintending and developing the National fisheries and which, moreover, has charge of all matters connected with same); and 6) — "Escola Nacional de Veterinária" (National Veterinary School).

It is the duty of the "Instituto de Biologia Animal" (Institute of Animal Biology) to study and investigate technical and scientific matters relating to stock breeding and to the products of animal origin which depend upon physical, chemical and biological analyses.

The principal function of the "Serviço de Fomento da Produção Animal" (Service for the Promotion of Animal Production) is to promote the creation and manufacture of products of animal origin intended for commercial exploitation. Besides the research work that it does regarding matters that, directly or indirectly are able to aid the bringing about of a greater economic development of the different products and by-products of stock breeding and allied industries, this Service promotes the importation of thoroughbred stock for breeding purposes, the importation of cocoons, as well as that of mulberry-tree sprigs,

stakes and seeds for the proper development of silk-worm breeding, also promoting thoroughbred cattle shows and the production of sprigs, seeds and sprouts of the forage plants most adaptable to the mesological conditions of the different regions of the country; and, moreover, the due registration of stock breeders and pedigree stock. Among the matters that said Service studies and the experiments that it makes, figure: the production and utilization of National and Foreign forage plants, their respective degree of utility for the alimentation of live-stock and suitability for pasture land and storage purposes, etc.; the rationalization of stock breeding and allied industries, and the consequent commercial exploitation of products of animal origin; adaptation and improvement of fields and land for the purpose of economic exploitation; increasing the quantity and improving the quality of silkworm produce, developing mulberry-tree growing, improving the quality of the plant, promoting the increase in the number of silk making establishments and the bettering of the quality of silk produced in same. Above mentioned Service, moreover, undertakes the divulga-tion of the proper knowledge of zoology, dairy farming, poultry farming, apia-ries, sericulture and scientific farming, maintaining a corps of ambulatory ex-perts on said subjects, who give lectures and effect practical demonstrations at suitable places throughout the country.

The main purpose of the "Serviço de Defesa Sanitária Animal" (Animal Sanitary Defence Service) is the maintenance of perfect sanitary living condi-tions for the National flocks and herds. Its attributions are many, but one may grant special mention to those on the following list: — the studying of all matters that can possibly be of interest to this service; inspection of animals imported from abroad or intended for inter-State commerce, so as to prevent the propagation of contagious diseases; the teaching, by means of lectures and practical demonstrations, of hygienic and prophylactic methods and the proper treatment of cattle diseases; the study and divulging of the means of eradicating the various kinds of endemic and ecumenical parasites afflicting live-stock in general; vaccination on a large scale and a generalized use of in-jections and all the other biological products, disinfecting preparations, cattle bath ingredients, itch remedies, medicinal compositions, etc., for veterinary use; supervision of the sale of chemical and pharmaceutical products; the survey of infested zones so as to separate them from the non-infested ones; ordering of quarantine measures; interdiction of markets, fairs, etc., for the purpose of preventing the spread of contagious diseases, etc., etc.

The "Serviço de Inspeção de Produtos de Origem Animal" (Service for the Inspection of Products of Animal Origin) has as its principal aim the ins-pection, from the sanitary point of view, of all the establishments where there are manufactured, in any way whatsoever, products of animal origin, intended for International or inter-State commerce. It also has to study the matters that, directly or indirectly, may possibly come under the jurisdiction of the sanitary inspectors, as regards the formulas, manipulation and conservation, by means of any process whatsoever, of products of animal origin; inspect and render te-chnical assistance to slaughterhouses in general including the establishments dealing in poultry and all those which, under any form whatsoever, manipulate, for alimentary or industrial purposes, products of animal origin, intended for International or inter-State commerce; encourage, in industrial circles, the use of cold storage for meat, game, fish, etc.; divulge projects, plans and esti-mates for the construction of slaughterhouses, depots, marts, plants, etc.; issue certificates for all products of animal origin from the establishments subject to Federal inspection, showing that same have been duly examined and found to be fit for consumption; etc., etc., etc.



It is only fair to state that aforesaid Service is fulfilling all of its duties with due competence and zeal.

The "Escola Nacional de Veterinária" (National Veterinary School) has as its aims the administering of superior, professional and technical instruction on the veterinary art, issuing veterinary diplomas for the exercise of the profession throughout the country.

As regards the aims and organization of the "Serviço de Caça e Pesca" (Hunting and Fishing Service) the reader will find ample data in the section of this book on extractive production.

The "Departamento Nacional de Produção Animal" (National Department of Animal Production) is one of the three great technical divisions of the "Ministério da Agricultura" (Ministry of Agriculture).

### BRAZIL'S LIVE-STOCK

a) — Oxen

GEOGRAPHICAL ZONES AND FEDERATED UNITS		NUMBERS					
		1920 (1)		1935 (2)		1937 (3)	
		Absolute	%	Absolute	%	Absolute	%
North.....	Territory of Acre.....	15,178	0.04	20,900	0.05	21,700	0.05
	Amazonas.....	238,449	0.70	330,000	0.82	342,200	0.84
	Pará.....	615,482	1.79	750,000	1.85	768,000	1.88
	Maranhão.....	834,596	2.44	950,000	2.34	965,400	2.36
	Piauí.....	1,044,734	3.05	1,020,000	2.52	1,036,600	2.54
	TOTALS.....	2,748,439	8.02	3,070,900	7.58	3,133,900	7.67
North-East.....	Ceará.....	580,028	1.69	800,000	1.97	829,300	2.03
	Rio Grande do Norte.....	318,274	0.93	330,000	0.82	331,600	0.81
	Paraíba.....	444,928	1.30	550,000	1.36	564,000	1.38
	Pernambuco.....	745,217	2.18	654,000	1.61	670,600	1.64
	Alagoas.....	388,371	1.13	304,000	0.75	311,800	0.76
	TOTALS.....	2,476,818	7.23	2,638,000	6.51	2,707,300	6.62
East.....	Sergipe.....	311,239	0.91	330,000	0.82	332,500	0.81
	Baía.....	2,698,106	7.87	3,100,000	7.65	3,153,600	7.72
	Espírito Santo.....	161,160	0.47	270,000	0.66	284,500	0.70
	TOTALS.....	3,170,505	9.25	3,700,000	9.13	3,770,600	9.23
South.....	Rio de Janeiro.....	581,203	1.70	676,000	1.67	688,600	1.69
	Federal District.....	23,367	0.07	20,000	0.05	20,400	0.05
	São Paulo.....	2,441,989	7.13	2,400,000	5.92	2,444,600	5.98
	Paraná.....	539,765	1.57	500,000	1.24	500,550	1.23
	Santa Catarina.....	614,202	1.79	680,000	1.68	715,800	1.75
	Rio Grande do Sul.....	8,489,496	24.77	10,129,000	25.00	9,710,180	23.76
	TOTALS.....	12,690,022	37.03	14,405,000	35.56	14,080,130	34.46
Central.....	Mato Grosso.....	2,831,667	8.26	3,500,000	8.64	3,589,100	8.78
	Goiás.....	3,020,769	8.81	4,000,000	9.87	4,130,600	10.11
	Minas Gerais.....	7,333,104	21.40	9,200,000	22.71	9,449,000	23.13
	TOTALS.....	13,185,540	38.47	16,700,000	41.22	17,168,700	42.02
BRAZIL.....		34,271,324	100.00	40,513,900	100.00	40,860,630	100.00

1) — Census.

2) — Investigation of the Production Statistical Service at Municipal Prefectures.

3) — Estimate.

## BRAZIL'S LIVE-STOCK

## b) — Horses

GEOGRAPHICAL ZONES AND FEDERATED UNITS		NUMBERS					
		1920 (1)		1935 (2)		1937 (3)	
		Absolute	%	Absolute	%	Absolute	%
North.....	Territory of Acre.....	909	0.02	1,600	0.03	1,700	0.03
	Amazonas.....	16,918	0.32	30,800	0.51	32,700	0.53
	Pará.....	63,291	1.20	82,000	1.35	84,500	1.36
	Maranhão.....	110,575	2.10	161,100	2.66	167,800	2.70
	Piauí.....	111,668	2.13	150,000	2.48	155,100	2.50
	TOTALS.....	303,361	5.77	425,500	7.03	441,800	7.12
North-East.....	Ceará.....	122,944	2.34	230,000	3.80	244,300	3.94
	Rio Grande do Norte.....	47,867	0.91	75,000	1.24	78,600	1.27
	Paraíba.....	106,644	2.03	120,000	1.98	121,800	1.97
	Pernambuco.....	189,856	3.61	163,000	2.70	165,800	2.67
	Alagoas.....	84,998	1.62	80,000	1.32	81,400	1.31
	TOTALS.....	552,309	10.51	668,000	11.04	691,900	11.16
East.....	Sergipe.....	47,724	0.91	60,000	0.99	61,600	0.99
	Baía.....	381,127	7.26	600,000	9.91	629,200	10.14
	Espírito Santo.....	50,106	0.95	79,000	1.31	82,900	1.34
	TOTALS.....	478,957	9.12	739,000	12.21	773,700	12.47
South.....	Rio de Janeiro.....	118,270	2.25	85,600	1.42	90,000	1.45
	Federal District.....	7,220	0.14	8,000	0.13	8,100	0.13
	São Paulo.....	489,803	9.32	420,000	6.94	424,600	6.85
	Paraná.....	190,138	3.62	207,000	3.42	207,820	3.35
	Santa Catarina.....	133,079	2.53	195,600	3.23	218,500	3.52
	Rio Grande do Sul.....	1,406,809	26.78	1,485,000	24.54	1,495,000	24.11
	TOTALS.....	2,345,319	44.64	2,401,200	39.68	2,444,020	39.41
Central.....	Mato Grosso.....	168,699	3.21	200,000	3.30	204,200	3.29
	Goiás.....	259,486	4.94	268,000	4.43	269,100	4.34
	Minas Gerais.....	1,145,568	21.81	1,350,000	22.31	1,377,300	22.21
	TOTALS.....	1,573,753	29.96	1,818,000	30.04	1,850,600	29.84
BRAZIL.....		5,253,699	100.00	6,051,700	100.00	6,202,020	100.00

## c) — Pigs

North.....	Territory of Acre.....	21,879	0.13	23,000	0.10	23,100	0.09
	Amazonas.....	35,270	0.22	52,000	0.23	54,200	0.21
	Pará.....	208,450	1.29	260,000	1.12	356,900	1.41
	Maranhão.....	171,683	1.06	350,000	1.51	373,800	1.47
	Piauí.....	208,398	1.29	360,000	1.55	380,200	1.50
	TOTALS.....	645,680	3.99	1,045,000	4.51	1,188,200	4.68
North-East.....	Ceará.....	183,737	1.13	384,200	1.66	410,900	1.62
	Rio Grande do Norte.....	30,327	0.19	80,000	0.34	86,600	0.34
	Paraíba.....	99,238	0.61	129,900	0.56	132,700	0.52
	Pernambuco.....	226,181	1.40	336,000	1.45	350,600	1.38
	Alagoas.....	86,869	0.54	150,000	0.65	158,400	0.62
	TOTALS.....	626,352	3.87	1,080,100	4.66	1,139,200	4.48

1) — Census.

2) — Investigation of the Production Statistical Service at Municipal Prefectures.

3) — Estimate.



## BRAZIL'S LIVE-STOCK

## c) — Pigs

GEOGRAPHICAL ZONES AND FEDERATED UNITS		NUMBERS					
		1920 (1)		1935 (2)		1937(3)	
		Absolute	%	Absolute	%	Absolute	%
East.....	Sergipe.....	51,855	0.32	915,000	0.50	123,400	0.49
	Baia.....	784,155	4.85	1,450,000	6.25	1,538,800	6.06
	Espirito Santo.....	367,168	2.27	440,000	1.90	449,700	1.77
	TOTALS.....	1,203,178	7.44	2,005,000	8.65	2,111,900	8.32
South.....	Rio de Janeiro.....	512,882	3.17	472,200	2.04	482,600	1.90
	Federal District.....	22,639	0.14	25,000	0.11	25,300	0.09
	São Paulo.....	2,934,158	18.15	2,500,000	10.78	2,574,000	10.14
	Paraná.....	778,342	4.81	1,000,000	4.31	1,143,500	4.50
	Santa Catarina.....	613,833	3.80	1,100,000	4.74	1,136,300	4.48
	Rio Grande do Sul.....	3,367,098	20.83	5,194,000	22.41	5,349,190	21.06
	TOTALS.....	8,228,952	50.90	10,291,200	44.39	10,710,890	42.17
Central.....	Mato Grosso.....	108,448	0.67	250,000	1.08	268,900	1.06
	Goiaz.....	485,390	3.00	1,011,200	4.36	2,128,100	8.38
	Minas Gerais.....	4,870,549	30.13	7,500,000	32.35	7,850,600	30.91
	TOTALS.....	5,464,387	33.80	8,761,200	37.79	10,247,600	40.35
BRAZIL.....		16,168,549	100.00	23,182,500	100.00	25,397,790	100.00

## d) — Sheep

North.....	Territory of Acre.....	5,067	0.06	5,000	0.04	5,200	0.04
	Amazonas.....	12,479	0.16	16,000	0.12	16,500	0.12
	Pará.....	31,861	0.40	30,000	0.24	30,800	0.23
	Maranhão.....	48,016	0.60	126,000	1.00	136,400	1.01
	Piauí.....	207,517	2.62	300,000	2.37	312,300	2.30
	TOTALS.....	304,740	3.84	477,000	3.77	501,200	3.70
North-East.....	Ceará.....	393,558	4.96	500,000	3.96	514,200	3.79
	Rio Grande do Norte.....	166,146	2.10	272,000	2.15	286,100	2.11
	Paraíba.....	279,156	3.52	181,000	1.43	190,400	1.41
	Pernambuco.....	419,872	5.29	345,700	2.73	363,700	2.68
	Alagoas.....	164,210	2.07	150,000	1.19	154,800	1.14
	TOTALS.....	1,422,942	17.94	1,448,700	11.46	1,509,200	11.13
East.....	Sergipe.....	123,708	1.56	163,000	1.29	168,200	1.24
	Baia.....	954,617	12.03	1,299,000	10.27	1,345,000	9.92
	Espirito Santo.....	11,627	0.15	33,000	0.26	35,900	0.26
	TOTALS.....	1,089,952	13.74	1,495,000	11.82	1,549,100	11.42
South.....	Rio de Janeiro.....	33,130	0.42	49,200	0.39	51,300	0.38
	Federal District.....	2,398	0.03	2,300	0.02	2,500	0.02
	São Paulo.....	96,885	1.22	90,000	0.71	93,000	0.69
	Paraná.....	56,285	0.71	74,000	0.59	61,900	0.45
	Santa Catarina.....	48,825	0.61	65,900	0.52	73,060	0.54
	Rio Grande do Sul.....	4,485,546	56.54	8,273,000	65.42	9,011,400	68.46
	TOTALS.....	4,723,049	59.53	8,554,400	67.65	9,293,160	68.54
Central.....	Mato Grosso.....	40,242	0.51	60,000	0.48	62,600	0.46
	Goiaz.....	41,574	0.52	100,000	0.79	107,800	0.79
	Minas Gerais.....	310,938	3.92	510,000	4.03	536,500	3.96
	TOTALS.....	392,754	4.95	670,000	5.30	706,900	5.21
BRAZIL.....		7,933,437	100.00	12,645,100	100.00	13,559,560	100.00

1) — Census.

2) — Investigation of the Production Statistical Service at Municipal Prefectures.

3) — Estimate.

## BRAZIL'S LIVE-STOCK

c) — Goats

GEOGRAPHICAL ZONES AND FEDERATED UNITS		NUMBERS					
		1920 (1)		1935 (2)		1937 (3)	
		Absolute	%	Absolute	%	Absolute	%
North.....	Territory of Acre.....	951	0.02	1,100	0.02	1,100	0.02
	Amazonas.....	3,602	0.07	10,000	0.17	10,900	0.18
	Pará.....	16,419	0.32	23,000	0.39	23,900	0.40
	Maranhão.....	120,692	2.37	290,700	4.95	313,400	5.21
	Piauí.....	301,353	5.93	450,000	7.66	469,800	7.80
	TOTALS.....	443,017	8.71	774,800	13.19	819,100	13.61
North-East.....	Ceará.....	530,743	10.44	585,000	9.96	592,200	9.84
	Rio Grande do Norte.....	216,290	4.25	227,000	3.87	228,400	3.79
	Paraíba.....	545,897	10.73	269,400	4.58	271,000	4.50
	Pernambuco.....	855,638	16.82	867,000	14.77	868,500	14.43
	Alagoas.....	219,081	4.31	200,000	3.41	200,400	3.33
	TOTALS.....	2,367,649	46.55	2,148,400	36.59	2,160,500	35.89
East.....	Sergipe.....	132,294	2.60	156,000	2.66	159,200	2.65
	Baía.....	1,419,761	27.91	1,830,000	31.17	1,884,700	31.31
	Espírito Santo.....	20,928	0.41	60,000	1.02	65,200	1.08
	TOTALS.....	1,572,983	30.92	2,046,000	34.85	2,109,100	35.04
South.....	Rio de Janeiro.....	41,580	0.82	60,400	1.03	62,900	1.05
	Federal District.....	4,685	0.09	4,000	0.07	4,200	0.07
	São Paulo.....	252,711	4.97	150,000	2.56	154,600	2.57
	Paraná.....	44,254	0.87	58,000	0.99	59,210	0.98
	Santa Catarina.....	16,576	0.32	37,000	0.63	28,560	0.47
	Rio Grande do Sul.....	94,413	1.86	134,300	2.28	135,000	2.24
	TOTALS.....	454,219	8.93	443,700	7.56	444,270	7.38
Central.....	Mato Grosso.....	9,374	0.19	30,000	0.51	32,800	0.54
	Goiás.....	36,311	0.71	66,400	1.13	70,400	1.17
	Minas Gerais.....	203,102	3.99	362,000	6.17	383,200	6.37
	TOTALS.....	248,787	4.89	458,400	7.81	486,400	8.08
BRAZIL.....		5,086,655	100.00	5,871,300	100.00	6,019,370	100.00

f) — Asses and mules

North.....	Territory of Acre.....	4,522	0.24	3,500	0.11	3,700	0.11
	Amazonas.....	2,108	0.11	5,000	0.15	5,400	0.16
	Pará.....	4,486	0.24	8,500	0.26	9,000	0.26
	Maranhão.....	22,138	1.19	60,000	1.86	65,000	1.92
	Piauí.....	56,148	3.01	70,000	2.17	71,800	2.12
	TOTALS.....	89,402	4.79	147,000	4.55	154,900	4.57
North-East.....	Ceará.....	117,793	6.31	200,000	6.18	211,000	6.23
	Rio Grande do Norte.....	82,227	4.41	85,000	2.63	85,400	2.52
	Paraíba.....	71,665	3.84	147,000	4.55	157,000	4.64
	Pernambuco.....	73,092	3.92	67,100	2.07	71,700	2.12
	Alagoas.....	14,105	0.76	40,000	1.24	43,500	1.28
	TOTALS.....	358,882	19.24	539,100	16.67	568,600	16.79

1) — Census.

2) — Investigation of the Production Statistical Service at Municipal Prefectures.

3) — Estimate.

## BRAZIL'S LIVE-STOCK

f) — Asses and mules

GEOGRAPHICAL ZONES AND FEDERATED UNITS		NUMBERS					
		1920 (1)		1935 (2)		1937 (3)	
		Absolute	%	Absolute	%	Absolute	%
East.....	Sergipe.....	12,995	0.70	42,000	1.30	45,900	1.36
	Baia.....	250,314	13.42	530,000	16.39	567,300	16.75
	Espirito Santo.....	31,833	1.70	100,000	3.10	109,100	3.22
	TOTALS.....	295,142	15.82	672,000	20.79	722,300	21.33
South.....	Rio de Janeiro.....	40,498	2.17	115,500	3.57	125,500	3.70
	Federal District.....	16,161	0.87	15,000	0.47	16,200	0.48
	São Paulo.....	326,079	17.48	350,000	10.83	353,200	10.43
	Paraná.....	43,969	2.36	100,000	3.09	98,480	2.90
	Santa Catarina.....	40,727	2.18	76,000	2.35	60,920	1.80
	Rio Grande do Sul.....	214,829	11.52	387,400	11.98	404,000	11.93
	TOTALS.....	682,263	36.58	1,043,900	32.29	1,058,300	31.24
Central.....	Mato Grosso.....	8,907	0.48	25,000	0.77	27,100	0.80
	Goiás.....	45,801	2.46	106,000	3.28	114,000	3.37
	Minas Gerais.....	384,862	20.63	700,000	21.65	742,000	21.90
	TOTALS.....	439,570	23.57	831,000	25.70	883,100	26.07
BRAZIL.....		1,865,259	100.00	3,233,000	100.00	3,387,200	100.00

1) — Census.

2) — Investigation of the Production Statistical Service at Municipal Prefectures.

3) — Estimate.

## CATTLE SLAUGHTERED

Number of animals, according to species, during the 1933-1937 period

SPECIES		NUMBERS				
		1933	1934	1935	1936	1937
Oxen.....	Municipal slaughterhouses.....	2,361,993	2,480,469	2,438,469	2,604,657	2,604,256
	Establishments inspected by the Federal Government.....	1,378,673	1,470,709	2,106,740	1,945,990	2,403,586
	TOTALS.....	3,740,666	3,951,178	4,545,209	4,550,647	5,007,842
Pigs.....	Municipal slaughterhouses.....	1,754,135	1,837,833	1,838,389	1,884,228	1,805,719
	Establishments inspected by the Federal Government.....	525,266	778,964	949,724	969,024	1,025,183
	TOTALS.....	2,279,401	2,616,797	2,788,113	2,853,252	2,830,902
Sheep.....	Municipal slaughterhouses.....	350,204	361,030	304,561	346,126	349,869
	Establishments inspected by the Federal Government.....	68,733	42,054	55,325	61,947	55,585
	TOTALS.....	418,937	403,084	359,886	408,073	405,454

## CATTLE SLAUGHTERED

Number of animals, according to species, during the 1933-1937 period

SPECIES		NUMBERS				
		1933	1934	1935	1936	1937
Goats.....	Municipal slaughterhouses.....	320,891	328,443	246,638	307,603	309,184
	Establishments inspected by the Federal Government.....	7,069	8,926	14,812	11,996	7,210
	TOTALS.....	327,960	337,369	261,450	319,599	316,394
Summary...	Municipal slaughterhouses.....	4,787,223	5,007,775	4,828,057	5,142,614	5,069,028
	Establishments inspected by the Federal Government.....	1,979,741	2,300,653	3,126,601	2,988,957	3,491,564
	GRAND TOTAL.....	6,766,964	7,308,428	7,954,658	8,131,571	8,560,592

Note — The 1937 data is subject to rectification.

## LIVE-STOCK PRODUCTS AND BY-PRODUCTS

Quantity and value during the 1933-1937 period

## a) — Quantity

PRODUCTS	QUANTITY (tons)				
	1933	1934	1935	1936	1937
Meat (1).....	864,266	934,154	1,075,808	1,072,176	1,191,337
Dairy Produce.....	2,417,027	2,472,717	2,490,755	2,348,259	2,447,000
Lard (2).....	80,000	82,000	88,000	85,000	96,000
Tallow (2).....	16,900	17,000	26,000	25,000	30,000
Wool (2).....	16,000	16,500	17,000	17,000	18,000
Hides (1).....	41,147	43,463	49,997	50,057	55,086
Skins (1).....	3,033	2,995	2,535	2,955	2,932
TOTALS.....	3,438,373	3,568,829	3,750,095	3,600,447	3,840,355

## b) — Value

PRODUCTS	VALUE (contos of réls)				
	1933	1934	1935	1936	1937
Meat (1).....	1,138,148	1,238,400	1,527,463	1,687,043	2,002,326
Dairy Produce.....	621,167	642,755	827,629	1,067,324	1,096,000
Lard (2).....	80,000	82,000	132,000	144,500	192,000
Tallow (2).....	11,740	11,900	18,200	22,500	28,500
Wool (2).....	24,000	49,500	57,800	76,500	90,000
Hides (1).....	67,413	98,372	104,940	131,112	149,834
Skins (1).....	18,704	21,389	18,780	23,334	24,577
TOTALS.....	1,961,172	2,144,316	2,686,812	3,152,313	3,583,237

(1) — Only of animals killed in Municipal Slaughterhouses and at establishments under Federal Government supervision.

(2) — Production of Rio Grande do Sul and visible exports from other States.

Note — The 1937 data is subject to rectification.



## MEAT AND BY-PRODUCTS OF SAME

Production in establishments supervised by Federal Government Inspectors  
during the 1933-1937 period

SPECIFICATION	QUANTITY (tons)				
	1933	1934	1935	1936	1937
Beef.....	92,001	156,747	173,145	201,547	236,880
Pork.....	17,865	32,613	35,128	33,655	37,796
Preserved meat in tins (Canned meat).....	4,236	7,607	9,629	14,450	19,940
Sausages and other minced meat products.....	6,285	8,416	9,750	10,724	12,090
Lard.....	47,491	44,764	60,583	54,874	54,566
Jerked beef.....	73,346	82,246	108,584	94,673	106,999
Hides and skins.....	30,546	41,529	53,912	51,242	64,745
Other industrial products.....	43,089	47,404	78,759	77,317	91,963
Other edible products.....	14,761	22,650	26,809	27,831	29,254
TOTALS.....	329,620	443,976	556,299	566,313	654,233

## DAIRY PRODUCE

Production in establishments supervised by Federal Government Inspectors  
during the 1933-1937 period

SPECIFICATION	QUANTITY (tons)				
	1933	1934	1935	1936	1937
Butter.....	170	2,970	5,631	9,481	13,216
Cheese.....	11	1,109	2,266	3,564	4,483
Pasteurized milk.....	—	5,326	48,501	67,347	126,110
Other industrial products.....	—	6	65	128	257
Other edible products.....	—	53	558	1,394	4,849
TOTALS.....	181	9,464	57,021	81,914	148,915

## PRODUCTION OF HIDES AND SKINS

Quantity and value during the 1933-1937 period

a) — Quantity

YEARS	QUANTITY (kilos)		
	In Municipal Slaughterhouses	In establishments inspected by the Federal Government	TOTALS
1933.....	23,680,900	15,499,400	44,180,300
1934.....	30,059,300	16,398,200	46,457,500
1935.....	29,056,830	23,474,900	52,531,730
1936.....	31,285,220	21,726,700	53,011,920
1937.....	31,303,350	26,714,770	58,018,120

## PRODUCTION OF HIDES AND SKINS

Quantity and value during the 1933-1937 period

b) — Value

YEARS	VALUE (contos of réls)		
	In Municipal Slaughterhouses	In establishments inspected by the Federal Government	TOTALS
1933.....	59,338	26,779	86,117
1934.....	81,728	38,033	119,761
1935.....	72,937	50,783	123,720
1936.....	95,977	58,469	154,446
1937.....	100,334	74,077	174,411

Note — The 1937 data is subject to rectification.

## PRODUCTION OF MEAT

Quantity and value during the 1933-1937 period

a) — Quantity

SPECIES		QUANTITY (kiloe)				
		1933	1934	1935	1936	1937
Oxen.....	Municipal slaughterhouses.....	396,999,100	425,404,200	420,659,566	445,009,782	466,350,715
	Establishments inspected by the Federal Government.....	289,759,800	309,048,900	442,415,400	408,657,900	505,707,632
	TOTALS.....	686,758,900	734,453,100	863,074,966	853,667,682	972,058,347
Pigs.....	Municipal slaughterhouses.....	129,454,700	134,366,900	135,826,554	138,436,635	136,625,159
	Establishments inspected by the Federal Government.....	37,488,200	55,322,000	67,430,404	68,800,704	72,787,993
	TOTALS.....	166,942,900	189,688,900	203,256,958	207,237,339	209,413,152
Sheep.....	Municipal slaughterhouses.....	6,224,900	6,222,300	5,087,301	5,844,993	5,899,013
	Establishments inspected by the Federal Government.....	1,592,700	971,800	1,272,475	1,424,781	1,278,455
	TOTALS.....	7,817,600	7,194,100	6,359,776	7,269,774	7,177,468
Goats.....	Municipal slaughterhouses.....	2,687,600	2,742,500	2,997,899	3,905,312	2,630,744
	Establishments inspected by the Federal Government.....	59,300	75,100	118,496	95,968	57,680
	TOTALS.....	2,746,900	2,817,600	3,116,395	4,001,280	2,688,424
Summary	Municipal slaughterhouses.....	535,366,300	568,735,900	564,571,320	593,196,722	611,505,631
	Establishments inspected by the Federal Government.....	328,900,000	365,417,800	511,236,775	478,979,353	579,831,760
	GRAND TOTAL.....	864,266,300	934,153,700	1,075,808,095	1,072,176,075	1,191,337,391

## PRODUCTION OF MEAT

Quantity and value during the 1933-1937 period

b) — Value

SPECIES		VALUE (contos of réis)				
		1933	1934	1935	1936	1937
Oxen.....	Municipal slaughterhouses.....	492,415	530,936	551,378	636,741	775,307
	Establishments inspected by the Federal Government.....	359,302	386,311	579,564	584,381	724,486
	TOTALS.....	851,717	917,247	1,130,942	1,221,122	1,499,793
Pigs.....	Municipal slaughterhouses.....	211,462	218,107	255,659	298,999	317,119
	Establishments inspected by the Federal Government.....	61,106	89,622	126,904	148,610	168,868
	TOTALS.....	272,568	307,729	382,563	447,609	485,987
Sheep.....	Municipal slaughterhouses.....	8,375	8,509	7,648	9,672	10,061
	Establishments inspected by the Federal Government.....	2,150	1,331	1,913	2,357	2,180
	TOTALS.....	10,525	9,840	9,561	12,029	12,241
Goats.....	Municipal slaughterhouses.....	3,266	3,489	4,230	6,132	4,213
	Establishments inspected by the Federal Government.....	72	95	167	151	92
	TOTALS.....	3,338	3,584	4,397	6,283	4,305
Summary	Municipal slaughterhouses.....	715,518	761,041	818,915	951,544	1,106,700
	Establishments inspected by the Federal Government.....	422,630	477,359	708,548	735,499	895,626
	GRAND TOTAL.....	1,138,148	1,238,400	1,527,463	1,687,043	2,002,326

Note — The 1937 data is subject to rectification.

## EXPORTATION OF FROZEN MEAT

Quantity and value, during the 1926-1937 period

YEARS	QUANTITY (kilos)	VALUE	
		In milréis	Equivalent in pounds sterling
1926.....	6,994,494	9,283,338	281,107
1927.....	32,603,729	40,406,659	982,679
1928.....	65,102,526	81,601,130	2,002,314
1929.....	79,341,547	111,342,531	2,734,615
1930.....	112,150,229	163,361,358	3,831,539
1931.....	74,023,000	101,097,000	1,569,000
1932.....	45,985,000	61,046,000	857,000
1933.....	44,012,000	47,618,000	643,000
1934.....	41,707,000	45,275,000	453,000
1935.....	54,174,000	60,318,000	487,000
1936.....	59,870,060	77,373,000	611,000
1937.....	70,601,000	106,447,000	905,000

**EXPORTATION OF CHILLED AND FROZEN BEEF**  
Quantity and value, according to destination in 1937

DESTINATION	QUANTITY (kilos)	VALUE (milréis)
Argelia.....	65,062	96,287
Barbados.....	51,975	74,120
Belgo-Luxemburg Union.....	2,480,006	3,605,037
Casablanca.....	60,976	83,785
France.....	6,841,443	9,240,001
Germany.....	307,577	559,524
Gibraltar.....	134,564	212,248
Great Britain.....	25,280,564	37,967,207
Italy.....	4,587,472	6,747,350
Netherlands.....	973,953	1,441,478
Philippines.....	259,176	357,221
Portugal.....	32,702	42,984
Senegal.....	2,290	3,171
Spain.....	17,811,798	25,897,461
Trinidad.....	1,553	2,303
Uruguay.....	4,510,317	6,417,189
TOTALS.....	63,401,428	92,747,366

**EXPORTATION OF PRESERVED MEAT**  
Quantity and value, during the 1926-1937 period

YEARS	QUANTITY (kilos)	VALUE	
		In milréis	Equivalent in pounds sterling
1926.....	959,902	2,492,915	76,169
1927.....	3,081,328	7,861,318	191,082
1928.....	3,030,325	8,148,875	190,980
1929.....	3,652,248	9,045,394	222,209
1930.....	6,598,465	17,307,340	396,354
1931.....	4,374,000	12,111,000	768,000
1932.....	2,348,000	9,259,000	1,000
1933.....	6,010,000	17,112,000	159,000
1934.....	7,656,000	22,073,000	83,000
1935.....	14,221,731	41,615,360	275,000
1936.....	19,704,620	55,101,155	436,000
1937.....	24,506,117	50,807,991	426,000



## EXPORTATION OF PRESERVED MEAT

Quantity and value, according to destination in 1937

DESTINATION	QUANTITY (kilos)	VALUE	
		In milrêls	Equivalent in pounds sterling
Argentina.....	62	1,026	...
Bahamas.....	62,541	106,377	...
Barbados.....	7,647	21,599	...
Belgian Congo.....	34,835	64,593	...
Belgo-Luxemburg Union.....	30,900	55,577	...
British Guiana.....	127,855	176,908	...
Cameroon.....	11,790	23,470	...
Casablanca.....	28,627	89,127	...
Cyprus.....	3,809	8,294	...
Colombia.....	5,803	22,936	...
Curacao.....	228,090	352,029	...
Denmark.....	47,462	136,321	...
Dutch Guiana.....	8,667	22,173	...
Egypt.....	15,744	32,851	...
Finland.....	24,364	58,575	...
France.....	267,538	683,740	...
French Congo.....	25,217	57,589	...
French Guinée.....	943	1,889	...
Gibraltar.....	56,418	237,325	...
Great Britain.....	1,602,761	3,231,148	...
Grenada.....	2,496	6,434	...
Honduras.....	1,370	5,206	...
Ivory Coast.....	7,076	11,285	...
Iraq.....	6,734	20,103	...
Jamaica.....	2,734	6,481	...
Japan.....	1,186	3,364	...
Malta.....	39,095	105,321	...
Mozambique.....	96,675	257,726	...
Netherlands.....	456,786	1,402,723	...
Newfoundland.....	334,832	468,487	...
Nigeria.....	2,575	7,601	...
Norway.....	52,820	147,500	...
Palestine.....	20,728	45,101	...
Porto Rico.....	3,195	12,272	...
Philippines.....	474,545	1,007,053	...
Roumania.....	5,798	11,596	...
Saint Christopher.....	13,801	29,441	...
São Domingos.....	2,850	9,695	...
São Vicente.....	2,810	3,435	...
Senegal.....	10,095	29,728	...
Spain.....	1,204,856	3,537,048	...
Sweden.....	496,894	1,629,620	...
Syria.....	35,381	66,657	...
Trinidad.....	491,467	867,363	...
Tunis.....	5,419	14,096	...
Union of South Africa.....	17,910	59,074	...
United States.....	6,776,981	16,787,028	...
Uruguay.....	11,342,490	18,858,217	...
Venezuela.....	5,445	14,789	...
TOTALS.....	24,506,117	50,807,991	426,000

## EXPORTATION OF LARD

Quantity and value during the 1926-1937 period

YEARS	QUANTITY (kilos)	VALUE	
		In milr��s	Equivalent in pounds sterling
1926.....	7,552	32,065	946
1927.....	79,336	235,650	5,806
1928.....	20,524	53,007	1,298
1929.....	388,502	1,018,626	25,037
1930.....	447,338	1,261,290	20,868
1931.....	296,000	692,000	10,000
1932.....	20,000	51,000	1,000
1933.....	8,755,000	13,202,000	159,000
1934.....	5,412,000	7,978,000	83,000
1935.....	13,639,007	33,911,986	275,000
1936.....	8,220,000	23,296,000	185,000
1937.....	328,884	1,170,156	10,000

Quantity and value, according to destination in 1937

DESTINATION	QUANTITY (kilos)	VALUE (milr��s)
Bolivia.....	1,510	5,994
Colombia.....	27,374	122,562
Great Britain.....	300,000	1,041,600
TOTALS.....	328,884	1,170,156

## EXPORTATION OF WOOL

Quantity and value, during the 1926-1937 period

YEARS	Quantity (kilos)	VALUE	
		In milr��s	Equivalent in pounds sterling
1926.....	7,205,933	42,358,713	1,185,031
1927.....	5,014,441	29,189,907	710,019
1928.....	4,608,567	26,884,484	259,604
1929.....	5,167,383	30,401,078	746,489
1930.....	7,361,638	44,078,573	1,020,466
1931.....	6,991,000	37,791,000	595,000
1932.....	1,772,000	6,277,000	88,000
1933.....	2,495,000	6,507,000	92,000
1934.....	2,588,000	13,047,000	135,000
1935.....	4,897,578	26,860,778	232,000
1936.....	6,216,000	47,851,000	377,000
1937.....	2,901,473	26,341,753	219,000

## EXPORTATION OF WOOL

Quantity and value, according to destination in 1937

DESTINATION	Quantity (kilos)	Value (milréis)
Argentina.....	1,862	12,879
Belgo-Luxemburg Union.....	163,815	1,324,083
Germany.....	2,702,984	24,773,512
Great Britain.....	32,812	231,279
TOTALS.....	2,901,473	26,341,753

## EXPORTATION OF HORSE HIDES

Quantity and value, according to destination in 1937

DESTINATION	QUANTITY (kilos)	VALUE (milréis)
Argentina.....	364	1,000
Uruguay.....	3,765	10,679
TOTALS.....	4,129	11,679

Note — There were also exported 2,494 kilos of dressed pig skins worth altogether 58 contos, 772 milréis, and 162,909 kilos of tanned hides or sole leather valued at 1,669 contos, 223 milréis.

## EXPORTATION OF SKINS

Aggregate added quantity and value during the 1926-1937 period

YEARS	Quantity (kilos)	VALUE	
		In milréis	Equivalent in pounds sterling
1926.....	3,759,351	32,990,712	977,441
1927.....	5,065,141	49,540,485	1,205,148
1928.....	5,399,517	53,773,373	1,319,423
1929.....	5,247,231	49,554,210	1,217,183
1930.....	5,919,490	60,096,926	1,356,000
1931.....	6,513,000	70,080,000	1,023,000
1932.....	4,812,000	44,442,000	641,000
1933.....	5,032,000	44,975,000	555,000
1934.....	4,007,000	41,803,000	423,000
1935.....	4,257,000	51,978,000	419,000
1936.....	4,726,000	64,279,000	512,000
1937.....	4,885,000	78,955,000	665,000

## EXPORTATION OF DEER SKINS

Quantity and value, according to destination in 1937

DESTINATION	Quantity (kilos)	Value (milréis)
Argentina.....	1,088	6,564
Germany.....	4,690	76,151
Japan.....	179	2,864
United States.....	300,085	4,675,265
Uruguay.....	424	5,628
TOTALS.....	306,466	4,766,472

## EXPORTATION OF GOAT SKINS

Quantity and value, according to destination in 1937

DESTINATION	Quantity (kilos)	Value (milréis)
France.....	84,647	1,386,531
Germany.....	24,711	513,785
Netherlands.....	9,908	190,288
United States.....	2,242,503	36,133,799
TOTALS.....	2,361,769	38,224,403

## EXPORTATION OF SHEEP SKINS

Quantity and value, according to destination in 1937

DESTINATION	QUANTITY (kilos)	VALUE (milréis)
Argentina.....	11,408	87,084
France.....	55,938	739,643
Germany.....	78,255	685,062
Great Britain.....	6,730	95,944
Japan.....	619	6,618
Mandchuria.....	307	2,037
Netherlands.....	2,506	34,200
Sweden.....	4,352	29,278
United States.....	850,787	10,843,015
Uruguay.....	21,695	113,350
TOTALS.....	1,032,597	12,636,231

Note—There were also exported in 1937 368,377 kilos of caietú, skins worth altogether 8,194,765\$000 and, also unspecified skins valued at 15,133:000\$000.





# *INDUSTRY*



## INTRODUCTORY

**B**RAZIL has made notable progress during the last few years in the industrial field. Most of our industries were born during the Great War, which made it difficult for us to obtain numerous manufactured articles, whose importation we just could not dispense with. Up to that time Brazil had derived almost all of her wealth from agricultural sources, but, forced by necessity, our Great Country found herself obliged to manufacture what she could not import. In the midst of the greatest obstacles, numerous industries unexpectedly began to appear in our industrial field. National manufactured products could not then, of course, be put on the market showing qualities identical to the congenerous ones from abroad. However as the Foreign brands either did not exist on the market, or were only to be had at prohibitive prices, the National brands, perforce, encountered purchasers.

On the War coming to an end, the incipient National industries, which were only just, so to speak, learning to walk, besides the technical difficulties that they were trying to overcome, had to struggle against Foreign competition, as our markets were replete with products from abroad, of a better quality than ours. Many industries could not, at the moment, resist, and went out of the running, but others could and *did* resist, continuing to live, but making every effort to improve the quality of the products. At the end of a few years, our industries were victorious, producing excellent articles, some of which, at least, were equal to the brands from overseas. On there being established, by law, the obligation for all products manufactured in the country to be labelled "Industria Brasileira" (Brazilian Industry) *i. e.*, made in Brazil, it was verified that numerous articles, in great demand owing to the excellence of their qualities, were really National, but bearing, up to then, labels giving the impression that they were imported goods, thus obtaining a much better price on the market.

Endowed with modern equipment and magnificent installations, Brazilian industries have developed more and more all the time. The value of our manufactured goods is now appraised at a sum total exceeding 8 million contos of réis. São Paulo is the greatest industrial center, not only of Brazil, but in all South America, its annual production in this field being worth more than 2,846,000 contos of réis.

According to the returns of the Census taken in 1920, Brazil already possessed, in 1919, 13,336 manufacturing establishments of various kinds, having altogether capital to the amount of nearly two million contos of réis and a total production of about five million contos of réis.



The large number of factories founded between 1915 and 1919, the capital invested and the workers employed in same, as well as the value of the manufactured articles, constitute the most expressive proof of the development verified in our industrial activities during said short period. During the course of aforesaid quinquennium there were inaugurated no less than 5,936 manufacturing establishments in which there were invested 791,264 contos of réis. The motive power utilized by above mentioned concerns attained the high level of 65,364 H. P., the number of regular workers on the pay rolls being registered at 63,950. Besides this, the machinery used by the different factories and similar works was, during the term hereinbefore mentioned, substituted by the most modern and efficient apparatus available.

During the short term of thirteen years, our industrial production had increased from 653,556 contos of réis, which was the amount verified through the census taken by the "Centro Industrial do Brasil" (Industrial Center of Brazil) in 1907, to 2,989,176 contos of réis, according to the official returns of the Census taken in 1920, covering the preceding year.

Since then, however, no General Census has been taken in Brasil. Nevertheless, by two statistical methods, one is able to gauge the intensity of the Brazilian industrial evolution. One of said means, of a general order, is constituted by the surveys made with the aid of Consumption Tax data; the other, which only partially covers the ground, even so does not fail to give a general idea of the progress made by Brazil in said field of activity, and consists of the utilization of the returns of the industrial censuses taken annually by the State of São Paulo.

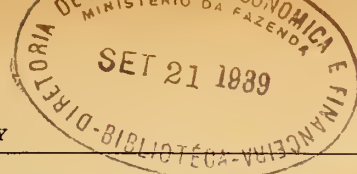
The first named method, which, by the way, we use in the tables given below, only takes into account the industries subject to payment of the tax hereinbefore mentioned. The returns, therefore, do not include data on the following industries, all of which contribute considerable amounts in the general computation of Brazilian production: 1 — Mate improvements; 2 — Jerked beef preparation; 3 — Lard making; Flour and Meal preparation; Sugar making and refining; 6 — Soap making; 7 — Manufacture of artificial fertilizers; 8 — Extraction of vegetable oils; 9 — Curing of hides and skins; 10 — Lumber milling and dressing, square and window frame making (and similar work at saw mills and carpenter's shops); 11 — Cart and waggon building; 12 — Iron and steel making (blast furnaces and foundries); 13 — Coal mining; 14 — Manganese ore production; 15 — Gold mining.

According to calculations based on the returns of the census taken in 1920, the part which had to pay the Consumption Tax represented, approximately, up to said year, 40 % of the industrial production of Brazil. However, the number of items attained by aforesaid impost has been progressively increased year by year, there now falling under same even cement making and certain building materials, such as bricks and piping of any kind and for any purpose whatsoever. This being so, there will be no exaggeration in admitting that, from 1925 to the present date, aforesaid percentage has increased to 70 %.

The words "Consumption tax", used in this publication, mean the inland impost elsewhere known as "Excise".

### FEDERAL CONTROLLING ORGANS

On the "Departamento Nacional de Industria e Comércio" (National Department of Industry and Commerce), a specialized organ of the "Ministério do Trabalho" (Ministry of Labour), there falls the duty of co-ordinating the official and private activities intended to promote, regulate and defend the in-



dustrial and commercial interests of Brazil, at home and abroad. Among its main divisions, that of "Feiras e Exposições" (Fairs and Exhibitions) is worthy of special mention. Through said Department, the Ministry maintains a representative member on the "Conselho Federal do Comércio Exterior" (Federal Council of Overseas Trade).

Integrated in the general structure of the Ministry of Labour, there equally function the "Departamento Nacional da Produção Industrial" (National Department of Industrial Production), with divisions for the registration of trade marks and patents, and the "Conselho de Recursos da Propriedade Industrial" (Council of Recourse for Industrial Property), this last named organ being presided over by the Minister of Labour.

The "Instituto Nacional de Tecnologia" (National Institute of Technology) was created for the following purposes: 1) — To study National raw materials and products, so as to have a better knowledge of same; 2) — to promote the obtainment and utilization, under the most favorable conditions, of the materials and products mentioned in the preceding item; 3) — to aid National technics and industry in every possible way.

For the execution of its programme, the Institute exercises two kinds of activities: a) — research work for the discovery of new products, technics or manufacturing processes; b) — routine work in the application of known processes for the determination of the characteristics of products.

The Institute is composed of seven divisions: 1) — Division of Inorganic Chemical Industries; 2) — Division of Organic Chemical Industries; 3) — Division of Metallurgic Industries; 4) — Division of Building Industries; 5) — Division of Fermentation Industries; 6) — Division of Textile Industries; 7) — Division of Industrial Combustibles and Thermic Motors.

### NATIONAL INDUSTRIES SUBJECT TO THE PAYMENT OF THE CONSUMPTION TAX

Number of factories, in each Federated Unit, in 1936

FEDERATED UNITS	NUMBER OF FACTORIES					
	Grand total	Operating under paid registration régime				Operating under gratuitous registry
		Total	Up to 6 workers	From 7 to 12 workers	More than 12 workers	
Amazonas.....	334	207	182	14	11	127
Pará.....	749	547	405	97	45	202
Maranhão.....	1,518	341	279	24	38	1,177
Piauí.....	493	142	117	17	8	351
Ceará.....	1,311	643	537	78	28	668
Rio Grande do Norte.....	477	133	89	37	7	344
Paraíba.....	1,113	311	251	38	22	802
Pernambuco.....	2,211	1,227	1,015	76	136	984
Alagoas.....	666	319	255	28	36	347
Sergipe.....	865	259	185	45	29	606
Baía.....	2,420	1,191	947	165	79	1,229
Espírito Santo.....	605	426	361	58	7	179
Rio de Janeiro.....	2,360	1,519	1,155	239	125	841
Federal District.....	4,971	4,020	3,092	405	523	951
São Paulo.....	13,434	11,391	8,563	1,455	1,373	2,043
Paraná.....	1,913	1,159	998	102	59	754
Santa Catarina.....	3,915	1,369	1,211	89	69	1,646
Rio Grande do Sul.....	8,802	5,134	4,070	710	354	3,668
Mato Grosso.....	425	209	166	24	19	216
Goiás.....	719	175	150	18	7	544
Minas Gerais.....	8,473	4,526	3,778	524	224	3,947
TOTALS.....	56,874	35,248	27,806	4,243	3,199	21,626

# NATIONAL INDUSTRIES SUBJECT TO THE PAYMENT OF THE CONSUMPTION TAX

Number of factories, according to species taxed

SPECIES TAXED	NUMBER OF FACTORIES		
	1930	1935	1936
Tobacco.....	992	785	820
Beverages.....	15,308	14,800	15,698
Alcohol (1).....	—	183	184
Matches.....	16	25	21
Salt.....	1,176	957	995
Footwear.....	8,157	7,719	7,203
Perfumes.....	873	1,340	1,140
Pharmaceutical specialties.....	1,329	1,488	1,291
Preserves.....	1,162	1,532	1,354
Vinegar and olive oil.....	934	1,185	1,247
Candles.....	159	181	151
Textiles.....	467	753	591
Manufactured textile goods.....	2,604	3,799	3,004
Paper and manufactured paper goods.....	215	350	299
Playing cards.....	6	9	11
Hats and walking-sticks.....	1,690	1,599	1,366
Earthen and glass ware.....	71	120	98
Hardware.....	163	674	573
Roasted or ground coffee, and tea.....	2,060	3,048	3,290
Butter.....	1,909	1,979	1,865
Furniture.....	4,072	5,231	4,820
Fire-arms, etc.....	17	22	19
Electric lamps, etc.....	13	100	110
Cheese and curd cheese.....	2,581	4,870	5,015
Paints and varnishes.....	211	535	463
Fans.....	11	25	22
Rubber manufactures.....	23	144	111
Razors, etc.....	20	32	25
Combs, brushes, etc.....	194	202	212
Toys.....	41	194	161
Leather goods, etc.....	3,278	3,504	3,646
Jewellery, etc.....	515	166	—
Calcium carbide, etc.....	2	3	—
Sanitary ware.....	36	48	60
Bricks, tiles, mosaics, etc.....	273	644	624
Musical instruments.....	71	89	83
Photographic apparatus.....	3	2	4
Stoves.....	163	268	236
Cement.....	—	5	7
Sewing thread.....	—	71	55
Boxes (2).....	70	—	—
TOTALS.....	50,885	58,681	56,874

(1) Including distilleries of alcohol, up to 1933.

(2) Consumption tax suppressed in 1934.



# NATIONAL INDUSTRIES SUBJECT TO THE PAYMENT OF THE CONSUMPTION TAX

General collection per item taxed during the 1936-1937 period

SPECIFICATION	AMOUNTS COLLECTED (IN CONTOS OF REIS)		Increase (+) or decrease (—) In 1937
	1936	1937	
Tobacco.....	121,408	140,569	+ 19,161
Beverages.....	139,891	150,519	+ 10,628
Alcohol.....	11,213	12,529	+ 1,316
Matches.....	22,897	23,697	+ 800
Salt.....	12,297	11,897	— 400
Footwear.....	21,010	22,245	+ 1,235
Perfumes and toilet articles.....	28,225	30,338	+ 2,113
Pharmaceutical specialties.....	15,169	17,870	+ 2,701
Preserves.....	17,739	18,569	+ 830
Vinegar, olive oil and other alimentary oils.....	8,798	9,486	+ 688
Candles.....	1,088	1,098	+ 10
Textile fabrics.....	72,733	76,182	+ 3,449
Woven, skin and fur goods.....	30,359	33,784	+ 3,425
Paper and manufactured paper goods.....	2,563	2,488	— 75
Playing cards.....	1,415	1,586	+ 171
Hats and walking sticks.....	6,852	7,199	+ 347
Earthen and glass ware.....	2,861	3,213	+ 352
Hardware and aluminium goods.....	3,253	3,752	+ 499
Roasted or ground coffee, and tea.....	7,187	7,560	+ 373
Butter and its substitutes.....	2,244	2,457	+ 213
Furniture.....	6,887	8,337	+ 1,450
Fire arms and ammunition.....	1,171	1,432	+ 261
Electric lamps, batteries and other electrical apparatus.....	5,166	5,445	+ 279
Cheese and curd cheese.....	4,351	4,313	— 38
Electrical energy.....	7,812	8,704	+ 892
Paints and varnishes.....	4,739	5,244	+ 505
Fans of various kinds.....	82	87	+ 5
Rubber manufactures.....	2,802	2,710	— 92
Razors and shaving brushes.....	1,208	856	— 352
Combs, brushes and dusters.....	2,847	3,056	+ 209
Toys.....	416	507	+ 91
Leather goods and related materials.....	4,062	5,008	+ 946
Jewellery, goldsmith's work, and bijouterie.....	3,700	4,398	+ 698
Gasolene and calcium carbide.....	—	4,194	+ 4,194
Sanitary ware.....	261	238	— 23
Tiles of different qualities and for various purposes, and mosaics.....	3,042	3,265	+ 223
Musical instruments.....	502	592	+ 90
Cameras and cinematographic machines.....	318	406	+ 88
Stoves, spirit lamps and similar appliances.....	342	376	+ 34
Cement.....	22,218	26,042	+ 3,824
Sewing thread.....	4,155	3,986	— 169
Business office emoluments.....	742	862	+ 120
Inland revenue stamps on mercantile stocks.....	1	—	— 1
<b>TOTALS.....</b>	<b>606,024</b>	<b>667,074</b>	<b>+ 61,050</b>



# NATIONAL INDUSTRIES SUBJECT TO THE PAYMENT OF THE CONSUMPTION TAX

Total production per item taxed during the 1933-1935 period

a) — Quantity

PRODUCTS	UNIT	QUANTITY		
		1933	1934	1935
1 — Tobacco:				
Cigars.....	Unit	191,612,000	194,221,000	121,797,000
Cigarettes.....	Packet	435,739,000	715,041,000	547,798,000
Shredded tobacco.....	Kilo	1,094,000	1,106,000	1,086,000
Snuff.....	>	2,000	1,000	1,000
2 — Beverages:				
Natural mineral waters.....	Litre	5,880,700	7,916,300	7,887,900
Aerated water in siphons; sodawater and syrups, etc., in bottles, for non-alcoholic beverages.....	>	22,180,600	22,629,900	22,352,900
Beer.....	>	114,127,500	118,133,600	179,166,300
Amer-picon, liqueurs, etc.....	>	2,177,300	2,277,400	2,189,200
Nectar (a sugar cane by-product).....	>	3,402,300	3,745,400	4,222,700
Natural fruit wine.....	>	50,221,100	52,981,400	47,118,300
Fermented wines, still and sparkling.....	>	77,400	133,800	113,400
Aguardente (a native rum).....	>	42,909,600	52,721,900	62,335,300
3 — Alcohol.....	>	26,250,700	27,785,500	34,642,500
4 — Matches.....	Box	49,828,600	51,293,700	54,386,100
5 — Salt.....	Ton	40,596,800	40,593,800	45,856,200
6 — Footwear:				
Long riding boots.....	Pair	25,000	20,000	23,000
Shoes, buskins, etc.....	>	15,800,000	17,267,000	25,971,000
Slippers and sandals.....	>	5,551,000	6,384,000	7,281,000
Rubber shoes, galoshes, boots and half boots.....	>	13,000	3,000	36,000
Bathing shoes.....	>	211,000	91,000	7,000
Gaiters and leggings.....	>	228,000	157,000	86,000
Tennis shoes.....	>	2,390,000	2,418,000	2,000,000
Reptile skin shoes.....	>	8,000	2,000	8,000
7 — Perfumery.....	Object	83,347,000	127,249,000	131,894,000
8 — Pharmaceutical specialties.....	>	53,075,000	56,806,000	79,443,000
9 — Preserve:				
Preserved meat and fish.....	Kilo	22,975,000	22,524,000	22,796,000
Sweetmeats, comfits, chocolates, candy, etc.....	>	22,281,000	26,636,000	29,980,000
Biscuits and buns.....	>	1,145,000	1,571,000	1,265,000
10 — Vinegar, olive oil, etc.:				
Vinegar.....	Litre	18,206,000	18,232,800	21,290,300
Olive oil.....	>	8,412,100	6,811,600	16,615,100
Acetic acid.....	>	60,500	217,900	107,500
11 — Candle:				
Tallow candles.....	Kilo	740,000	2,213,000	1,243,000
Stearin candles.....	>	4,511,000	3,295,000	4,031,000
Wax candles.....	>	376,000	277,000	112,000
12 — Playing cards.....	Pack	560,000	662,000	1,069,000

# NATIONAL INDUSTRIES SUBJECT TO THE PAYMENT OF THE CONSUMPTION TAX

Total production per item taxed during the 1933-1935 period

a) — Quantity

PRODUCTS	UNIT	QUANTITY		
		1933	1934	1935
13 — Walking-sticks.....	Unit	14,000	14,000	10,000
14 — Textiles:				
Cotton fabrics.....	Metre	638,803,000	715,814,000	752,891,000
Hemp cloth.....	»	19,197,000	16,447,000	15,813,000
Linen.....	»	4,450,000	1,192,000	135,000
Alpaca and flannel.....	»	1,540,000	945,000	749,000
Cashmeres and cassinette.....	»	5,153,000	5,975,000	6,775,000
Silk.....	»	1,067,000	1,196,000	2,135,000
Textile remnants.....	»	263,000	258,000	878,000
Carpets and runners.....	»	118,000	201,000	262,000
15 — Textile goods:				
Blankets.....	Unit	4,466,000	5,466,000	7,142,000
Serviettes, table covers, towels, etc.....	»	8,214,000	7,218,000	10,266,000
Curtains, blinds, etc.....	»	379,000	404,000	353,000
Saddle-cloth.....	»	86,000	87,000	77,000
Shirts.....	»	7,509,000	6,891,000	10,773,000
Pants, drawers, knickers.....	»	1,634,000	1,694,000	2,658,000
Collars.....	»	1,764,000	1,487,000	1,213,000
Cuffs.....	Pair	7,000	3,000	3,000
Handkerchiefs.....	Unit	10,874,000	11,557,000	13,633,000
Ties.....	»	2,508,000	2,503,000	1,937,000
Suspenders and braces.....	»	566,000	333,000	303,000
Garters.....	Pair	821,000	566,000	750,000
Corsets, stays, etc.....	Unit	260,000	425,000	170,000
Socks and stockings.....	Pair	24,813,000	29,743,000	36,235,000
Pyjamas.....	Unit	685,000	379,000	349,000
Ready-made clothes.....	»	1,830,000	2,198,000	2,447,000
Carpets and mats.....	»	45,000	98,000	112,000
Boas, furs, etc.....	»	50,000	40,000	59,000
Sacks and bags.....	»	44,299,000	54,529,000	72,587,000
Belts and stays.....	»	—	—	36,000
Gloves.....	Pair	109,000	90,000	228,000
Ribbons, straps, braids, etc.....	Kilo	244,000	268,000	426,000
Lace.....	»	43,000	71,000	107,000
16 — Paper and paper goods:				
Wrapping paper.....	»	44,012,000	56,565,000	75,961,000
Silk paper.....	»	2,714,000	3,057,000	5,005,000
Wall paper, etc.....	Piece	317,000	289,000	313,000
Letter paper and envelopes.....	Packet	4,508,000	3,743,000	4,112,000
Serpentines (paper streamers for carnival).....	»	1,110,000	388,000	405,000
Confetti.....	Kilo	268,000	226,000	169,000
17 — Hats:				
Parasols and umbrellas.....	Unit	999,000	1,071,000	1,329,000
Men's hats, etc.....	»	3,465,000	3,781,000	4,770,000
Women's hats, etc.....	»	561,000	263,000	245,000
Bonnets and caps.....	»	1,512,000	1,259,000	850,000
18 — Earthenware and glass				
Ordinary white stoneware.....	Kilo	4,380,000	3,044,000	4,125,000
Decorated stoneware.....	»	2,102,000	2,228,000	2,360,000
Porcelain.....	»	137,000	63,000	262,000
Plain and moulded glass.....	»	2,553,000	2,987,000	5,276,000
Cut and worked glass.....	»	606,000	454,000	435,000

# NATIONAL INDUSTRIES SUBJECT TO THE PAYMENT OF THE CONSUMPTION TAX

Total production per item taxed during the 1933-1935 period

a) — Quantity

PRODUCTS	UNIT	QUANTITY		
		1933	1934	1935
19 — Hardware and aluminum goods:				
Iron screws, nails, etc.....	Kilo	13,263,000	16,596,000	17,891,000
Copper screws, nails, etc.....	»	153,000	352,000	487,000
Hinges and butts, etc.....	»	2,046,000	1,230,000	1,283,000
Manufactured articles of aluminium and iron, etc.....	»	6,878,000	9,288,000	13,497,000
20 — Roasted or ground coffee and tea:				
Roasted or ground coffee.....	»	45,704,000	48,663,000	52,484,000
Tea.....	»	—	29,000	28,000
21 — Butter.....	»	16,057,000	16,286,000	20,959,000
22 — Furnitures.....	Unit	2,570,000	3,227,000	3,356,000
23 — Fire-arms and ammunition:				
Fire-arms.....	»	24,000	21,000	8,000
Fuses and cartridges.....	»	200,151,000	100,326,000	500,120,000
Iron and lead bullets.....	Kilo	1,238,000	1,283,000	1,070,000
24 — Lamps, batteries and other electrical equipment:				
Lamps.....	Unit	4,430,000	5,229,000	9,125,000
Batteries.....	»	141,000	160,000	134,000
Electrical apparatus.....	»	44,000	114,000	44,000
25 — Cheese and curd:				
Minas cheese (i. e., cheese of the "Minas" type).....	Kilo	10,752,000	12,505,000	18,134,000
Other kinds of cheese.....	»	4,611,000	5,258,000	5,955,000
Skimmed cheese.....	»	607,000	668,000	708,000
26 — Paints and varnishes:				
Writing ink.....	»	1,031,000	679,000	1,544,000
Paint prepared with oil, water, etc.....	»	2,633,000	2,876,000	5,128,000
Varnishes and enamels.....	»	1,081,000	611,000	497,000
Materials or substances for dyeing and cleaning.....	»	348,000	126,000	335,000
Wax, pomades, etc.....	»	2,521,000	2,373,000	2,188,000
Typewriter ribbons.....	Unit	151,000	99,000	248,000
27 — Fans.....	»	545,000	285,000	767,000
28 — Manufactured rubber goods:				
Inner tubes for automobiles (motor cars).....	»	45,730,000	51,478,000	70,710,000
Inner tubes for motorcycles.....	»	583,000	487,000	—
Rubber tires for motor cars (automobiles).....	»	7,948,000	10,644,000	16,608,000
Rubber tires for motorcycles.....	»	8,460,000	12,914,000	—
Solid rubber tires, for automobiles (motor cars).....	»	—	—	—
Capes, waterproof coats, etc.....	»	23,636,000	19,870,000	15,819,000
Hotwater bottles, bags, etc.....	»	21,597,000	40,524,000	64,714,000
Garters.....	Pair	102,000	151,000	209,000
Belts.....	Unit	472,000	792,000	1,095,000
Rubber bulbs for motor horns.....	»	—	—	—
Electrician's gloves, etc.....	Pair	804	3,850	200,091
Sheet rubber.....	Kilo	66,000	167,000	1,398,000
Runners, carpets, etc.....	»	712,000	196,000	609,000
Hose and tubes.....	»	632,000	289,000	959,000

# NATIONAL INDUSTRIES SUBJECT TO THE PAYMENT OF THE CONSUMPTION TAX

Total production per item taxed during the 1933-1935 period

a) — Quantity

PRODUCTS	UNIT	QUANTITY		
		1933	1934	1935
<b>29 — Razors and shaving brushes:</b>				
Razors.....	Unit	52,000	49,000	103,000
Razor blades.....	Dozen	239,000	319,000	510,000
Shaving brushes.....	Unit	115,000	73,000	220,000
<b>30 — Combs, brushes and feather dusters:</b>				
Combs.....	»	4,996,000	7,088,000	10,425,000
Brushes.....	»	6,721,000	6,453,000	8,921,000
Feather dusters.....	»	305,000	423,000	418,000
<b>31 — Toys.....</b>	»	225,000	176,000	146,000
<b>32 — Leather goods:</b>				
Portmanteaux, baskets and trunks.....	»	624,000	596,000	521,000
Bags, suitcases, valises, etc.....	»	79,000	99,000	548,000
Portfolios, blotting-pads, albums, etc.....	»	115,000	124,000	216,000
Pocket-books and purses.....	»	818,000	903,000	1,293,000
Belts.....	»	1,424,000	1,604,000	2,391,000
Footballs.....	»	48,000	58,000	42,000
Whips.....	»	166,000	213,000	286,000
Walking-stick, cane, umbrella and parasol tops.....	»	292,000	261,000	691,000
Reins, bands, straps, etc.....	»	304,000	351,000	1,415,000
Saddles girths and harness.....	»	130,000	105,000	86,000
Cloaks, capes and overalls.....	»	—	468,000	1,160,000
Boxing gloves.....	Pair	—	—	541,000
<b>33 — Calcium carbide.....</b>	Kilo	4,050,000	4,693,000	4,362,000
<b>34 — Sanitary ware.....</b>	Unit	214,000	125,000	169,000
<b>35 — Bricks, tiles and other building material:</b>				
Tiles.....	M <sup>2</sup>	751,000	906,000	1,156,000
Glazed or Dutch tiles and mosaics.....	»	180,000	177,000	534,000
Floor, wall and ceiling friesework.....	Metre	501,000	590,000	104,000
Drain pipes or piping.....	Unit	2,236,000	2,743,000	2,839,000
Bricks.....	»	—	—	4,000
<b>36 — Musical Instruments:</b>				
Wind and string instruments.....	»	37,000	24,000	40,000
Records and music rolls.....	»	334,000	295,000	851,000
<b>37 — Cameras, kodaks, and other photographic apparatus:</b>				
Albuminate paper, etc.....	Kilo	23,000	24,000	20,000
<b>38 — Stoves, ranges and spirit lamps.....</b>	Unit	73,000	103,000	134,000
<b>39 — Cement.....</b>	Kilo	173,044,000	297,238,000	368,395,000
<b>40 — Packing-thread, string and cord:</b>				
Sewing thread.....	Tube	59,426,000	29,301,000	181,619,000
Thread for embroidery purposes.....	»	1,644,000	501,000	1,594,000



# NATIONAL INDUSTRIES SUBJECT TO THE PAYMENT OF THE CONSUMPTION TAX

Total production per item taxed during the 1933-1935 period

b) — Value

PRODUCTS	VALUE (contos of réis)		
	1933	1934	1935
1 — Tobacco:			
Cigars.....	27,072	26,530	14,513
Cigarettes.....	123,497	206,605	160,452
Shredded tobacco.....	8,572	8,695	8,430
Snuff.....	8	6	5
2 — Beverages:			
Natural mineral waters.....	6,377	8,595	8,539
Aerated water in siphons, sodawater and syrups, etc., in bottles, for non-alcoholic beverages.....	34,500	34,964	34,163
Beer.....	132,834	137,908	214,678
Amer-picon, liqueurs, etc.....	12,938	13,281	12,233
Nectar (a sugar cane by-product).....	6,042	6,949	7,880
Natural fruit wine.....	69,474	73,124	65,143
Fermented wines, still and sparkling.....	139	241	205
Aguardente (a native rum).....			
3 — Alcohol.....	46,006	43,474	68,059
4 — Matches.....	74,419	78,736	82,646
5 — Salt.....	34,913	34,099	35,309
6 — Footwear:			
Long riding boots.....	1,912	1,511	2,157
Shoes, buskins, etc.....	305,229	338,479	479,215
Slippers and sandals.....	21,519	24,646	27,313
Rubber shoes, galoshes, boots and half boots.....	90	23	250
Bathing shoes.....	1,476	637	46
Gaiters and leggings.....	2,871	1,877	1,039
Tennis shoes.....	8,603	8,706	7,199
Reptile skin shoes.....	361	97	369
7 — Perfumery.....	117,807	191,328	192,485
8 — Pharmaceutical specialties.....	195,117	157,052	218,346
9 — Preserves:			
Preserved meat and fish.....	68,517	68,145	69,483
Sweetmeats, comfits, chocolates, candy, etc.....	61,378	76,814	92,312
Biscuits and buns.....	4,579	6,286	5,060
10 — Vinegar, olive oil, etc.:			
Vinegar.....	6,014	6,026	7,159
Olive oil.....	42,060	34,058	83,076
Acetic acid.....	1,089	3,923	1,935
11 — Candles:			
Tallow candles.....	1,853	6,259	2,395
Stearin candles.....	15,144	10,029	12,916
Wax candles.....	2,565	1,892	797
12 — Playing cards.....	2,240	2,649	4,278

# NATIONAL INDUSTRIES SUBJECT TO THE PAYMENT OF THE CONSUMPTION TAX

Total production per item taxed during the 1933-1935 period

b) — Value

PRODUCTS	VALUE (contos of réls)		
	1933	1934	1935
13 — Walking-sticks.....	135	137	103
14 — Textiles:			
Cotton fabrics.....	730,194	937,804	1,036,747
Hempen cloth.....	21,589	21,417	21,093
Linen.....	27,055	7,304	934
Alpaca and flannel.....	15,630	9,622	7,671
Cashmeres and cassinette.....	101,784	131,382	142,346
Silk.....	214,681	139,058	426,234
Textile remnants.....	1,812	1,774	6,110
Carpets and runners.....	404	698	894
15 — Textile goods:			
Blankets.....	55,829	65,042	78,646
Serviettes, table covers, towels, etc.....	14,029	9,531	13,446
Curtains, blinds, etc.....	6,812	6,889	6,112
Saddle cloth.....	686	696	613
Shirts.....	67,735	62,775	97,480
Pants, drawers, knickers.....	8,314	7,572	10,932
Collars.....	2,264	1,908	1,610
Cuffs.....	13	7	7
Handkerchiefs.....	6,774	7,244	9,306
Ties.....	10,659	10,993	8,688
Suspenders and braces.....	1,180	666	607
Garters.....	1,174	796	1,081
Corsets, stays, etc.....	6,021	9,159	4,314
Socks and stockings.....	44,790	55,717	67,225
Pyjamas.....	12,550	6,716	6,017
Ready-made clothes.....	63,091	80,200	94,079
Carpets and mats.....	446	947	1,084
Boas, furs, etc.....	7,760	10,297	13,848
Sacks and bags.....	88,598	109,059	145,173
Belts and stays.....	—	—	36
Gloves.....	2,248	1,681	3,156
Ribbons, straps, braids, etc.....	32,270	31,903	54,160
Lace.....	2,889	3,840	6,466
16 — Paper and paper goods:			
Wrapping paper.....	84,584	114,612	158,814
Silk paper.....	10,904	12,078	19,799
Wall paper, etc.....	952	688	940
Letter paper and envelopes.....	10,679	11,432	15,327
Serpentines (paper streamers for carnival).....	1,449	510	544
Confetti.....	646	545	432
17 — Hats:			
Parasols and umbrellas.....	13,398	20,661	17,717
Men's hats, etc.....	59,821	63,567	76,895
Women's hats, etc.....	14,268	7,023	6,855
Bonnets and caps.....	8,983	7,431	5,035
18 — Earthenware and glass:			
Ordinary white stoneware.....	10,254	6,552	9,622
Decorated stoneware.....	6,065	5,831	8,265
Porcelain.....	685	345	1,359
Plain and moulded glass.....	9,299	11,430	24,876
Cut and worked glass.....	5,854	4,305	4,120

# NATIONAL INDUSTRIES SUBJECT TO THE PAYMENT OF THE CONSUMPTION TAX

Total production per item taxed during the 1933-1935 period

b) — Value

PRODUCTS	VALUE (contos of réis)		
	1933	1934	1935
19 — Hardware and aluminium goods:			
Iron screws, nails, etc.....	33,038	43,252	47,791
Copper screws, nails, etc.....	368	845	1,169
Hinges and butts, etc.....	7,718	5,118	5,852
Manufactured/articles of iron and aluminium, etc.....	81,753	96,528	150,296
20 — Roasted or ground coffee and tea:			
Roasted or ground coffee.....	108,025	123,657	144,449
Tea.....	—	944	911
21 — Butter.....	94,821	95,481	122,236
22 — Furniture.....	115,596	143,864	151,934
23 — Fire-arms and ammunition:			
Fire-arms.....	672	584	212
Fuses and cartridges.....	8,464	4,798	21,494
Iron and lead bullets.....	2,446	2,537	2,112
24 — Lamps, batteries and other electrical equipment:			
Lamps.....	11,076	13,071	22,811
Batteries.....	238	289	265
Electrical apparatus.....	2,553	6,745	2,530
25 — Cheese and curd:			
Minas cheese.....	45,917	52,854	77,396
Other kinds of cheese.....	24,797	27,282	30,716
Skimmed cheese.....	699	788	821
26 — Paints and varnishes:			
Writing ink.....	3,566	2,357	5,337
Paint prepared with oil, water, etc.....	13,459	14,572	25,602
Varnishes and enamels.....	10,407	5,842	4,849
Materials or substances for dyeing and cleaning.....	1,567	568	1,506
Wax, pomades, etc.....	8,420	7,970	7,527
Typewriter ribbons.....	603	398	993
27 — Fats.....	2,172	1,131	3,039
28 — Manufactured rubber goods:			
Inner tubes for automobiles (motor cars).....	1,601	1,802	2,475
Inner tubes for motorcycles.....	3	3	—
Rubber tires for motor cars (automobiles).....	1,987	2,661	4,152
Rubber tires for motorcycles.....	1,142	1,743	—
Solid rubber tires for automobiles (motor cars).....	—	—	—
Capes, waterproof coats, etc.....	1,980	1,991	1,394
Hotwater bottles, bags, etc.....	216	405	647
Garters.....	224	302	458
Belts.....	2	4	5
Rubber bulbs for motor horns.....	—	—	—
Electrician's gloves, etc.....	7	38	2,201
Sheet rubber.....	305	931	9,592
Runners, carpets, etc.....	5,698	1,566	6,093
Hose and tubes.....	5,374	2,314	7,862

# NATIONAL INDUSTRIES SUBJECT TO THE PAYMENT OF THE CONSUMPTION TAX

Total production per item taxed during the 1933-1935 period

b) — Value

PRODUCTS	VALUE (contos of réle)		
	1933	1934	1935
29 — Razors and shaving brushes:			
Razors.....	310	295	619
Razor blades.....	718	956	1,531
Shaving brushes.....	173	110	530
30 — Combs, brushes and feather dusters:			
Combs.....	2,080	3,706	5,495
Brushes.....	5,400	5,157	7,142
Feather dusters.....	900	1,250	1,238
31 — Toys.....	681	538	448
32 — Leather goods:			
Portmanteaux, baskets and trunks.....	12,826	12,210	11,466
Bags, valises, suitcases, etc.....	1,190	1,547	9,276
Portfolios, blotting-pads, albums, etc.....	1,123	1,293	2,231
Pocket-books and purses.....	7,365	8,129	11,633
Belts.....	2,676	3,036	4,782
Footballs.....	575	694	500
Whips.....	612	788	1,205
Walking-stick, cane, umbrella and parasol tops.....	1,830	1,960	5,492
Reins, bands, straps, etc.....	2,087	2,321	8,732
Saddles, girths and harness.....	7,042	6,106	5,009
Cloaks, capes and overalls.....	—	94	232
Boxing gloves.....	—	—	27
33 — Calcium carbide.....	3,240	3,755	3,490
34 — Sanitary ware.....	7,648	4,620	6,201
35 — Bricke tiles and other building material:			
Tiles.....	9,249	10,222	14,074
Glazed or Dutch tiles and mosaics.....	4,129	4,082	12,278
Floor, wall and ceiling friezework.....	2,004	2,361	415
Drain pipes or piping.....	4,495	5,501	5,756
Bricks.....	—	—	1
36 — Musical instruments:			
Wmd and string instruments.....	1,714	1,091	1,862
Records and music rolls.....	2,019	1,811	5,955
37 — Cameras, kodaks and other photographic apparatus:			
Albuminate paper, etc.....	280	289	243
38 — Stoves, ranges and spirit lamps.....	11,038	15,239	19,973
39 — Cement.....	25,095	48,153	62,605
40 — Packing-thread, string and cord:			
Sewing thread.....	17,828	8,790	54,486
Thread for embroidery purposes.....	98,613	34,036	95,626



## BEVERAGES

**A** VERY satisfactory trend is being followed by the production of drinks in contributing with a valuable share for the Brazilian industrial development. Among the outstanding products of this nature, beer holds the leading position and is, from various standpoints, a well advanced industry, the production of which finds a fairly good acceptance in the home markets.

Also viticulture is being fostered in the country and the growers are very much interested in intensifying the production of the best varieties of grapes, as well as to improve the methods of culture and the techniques of fermentation in order to refine the quality of the national products. Rio Grande do Sul is the principal producer of wine in Brazil and is in this industry chronologically followed by the States of São Paulo, Minas Gerais, Santa Catarina and Paraná.

In March of 1938, the Federal Government issued a decree approving the "Wine Regulations" which deal with the production and circulation of wine and by — products in the National territory. Such a measure was determined in view of the viticulture development in the country. It has coped with the requirements in this sphere and will undoubtedly add efficiency and more value to the industry by the enforcement of measures arising from the regulations introduced.

## COLD STORAGE PLANTS

**S**LAUGHTERHOUSE Cold Storage Plants are important factors of our economic development. Thanks to them, our frozen meat exports steadily increase and the cattle breeders augment the number of their herds, being well aware that there will not be lacking a good market to recompense their efforts. At the present time there are nine Slaughterhouse Cold Storage Plants in Brazil. Their daily slaughtering capacity is: 7,000 oxen, 5,400 pigs and 4,000 sheep and goats. The refrigerating chambers of aforesaid plants have a storage capacity of 42,000 tons.

## ELECTRIC LIGHT AND POWER INDUSTRY

**E**LECTRIC power of hydraulic origin is an element on which Brazil will always be able to count, on an ever increasing scale, for its proper economic development. Although we, perchance, lack coal of a superior quality, still we have a superabundance of waterfalls which give us electricity. We are only using, up to the present time, about 1,000,000 H.P. distributed in 648 hydro-electric plants. Therefore our development in the electric light and power field is not small, as at the first glance it appears to be. A retrospective summary of the matter is all that is needed to show the progress we have made in this branch of National endeavour.

It was in 1883 that the first thermo-electric power station was inaugurated in Brazil. This plant had a 90 H. P. capacity. In 1889, the last year of the Monarchy, there were in the country three concerns which exploited electricity, their plants having a total capacity of 10,420 H. P. Slowly, but surely,

this industry continued to make progress. Nineteen Twenty, however, was the year in which the development of the thermo-electric and hydro-electric concerns gained a vigorous impulse in consequence of the new industries which were being installed. In 1920 there were functioning in Brazil 306 electric light and power companies, having a total capacity of 275,632 H. P., serving 431 localities. By 1930 there were 791 of these concerns, with a combined capacity of 931,464 H. P. From 1930 to 1934, the number increased to 952, of which 446 were thermo-electric plants, 573 hydro-electric and 16 mixed power houses, having altogether a capacity of 1,010,546 H. P., supplying light and power to 1,777 localities.

### APPRAISAL OF HYDRAULIC POWER IN BRAZIL, — 1937

FEDERATED UNITS	POWER IN H. P. ACCORDING TO THE OFFICIAL CLASSIFICATION OF BASINS								Totals
	Amazon Basin	North — East Basin	São Francisco Basin	East Basin	Paraguay Basin	Paraná Basin	Uruguay Basin	South — East Basin	
Territory of Acre.....	—	—	—	—	—	—	—	—	—
Amazonas.....	660,000	—	—	—	—	—	—	—	660,000
Pará.....	1,838,800	35,800	—	—	—	—	—	—	1,874,600
Maranhão.....	19,000	26,700	—	—	—	—	—	—	45,700
Piauí.....	—	11,500	—	—	—	—	—	—	11,500
Ceará.....	—	150	—	—	—	—	—	—	150
Rio Grande do Norte.....	—	—	—	—	—	—	—	—	—
Paraíba.....	—	1,200	—	—	—	—	—	—	1,200
Pernambuco.....	—	11,000	35,000	—	—	—	—	—	46,000
Alagoas.....	—	—	235,000	—	—	—	—	—	235,000
Sergipe.....	—	—	—	500	—	—	—	—	500
Baía.....	—	—	1,049,600	173,600	—	—	—	—	1,223,200
Espírito Santo.....	—	—	—	99,300	—	—	—	—	99,300
Rio de Janeiro.....	—	—	—	543,100	—	—	—	—	543,100
Federal District.....	—	—	—	400	—	—	—	—	400
São Paulo.....	—	—	—	238,400	—	1,936,800	—	426,400	2,601,600
Paraná.....	—	—	—	—	—	2,503,200	—	89,300	2,592,500
Santa Catarina.....	—	—	—	—	—	—	82,900	113,700	196,600
Rio Grande do Sul.....	—	—	—	—	—	—	116,000	129,300	245,300
Mato Grosso.....	1,112,800	—	—	—	89,500	1,000,000	—	—	2,202,300
Goiás.....	765,300	—	—	—	—	344,900	—	—	1,110,200
Minas Gerais.....	—	—	253,700	1,637,900	—	3,936,000	—	—	5,827,600
TOTALS { H. P. ....	4,395,900	86,350	1,573,300	2,693,200	89,500	9,720,900	198,900	758,700	19,516,750
{ %.....	22.52	0.44	8.06	13.80	0.46	49.81	1.02	3.89	100.00

Note — The table shows the appraisal made by the Water Service of the National Department of Mineral Production, regarding dry season discharges.

### ELECTRIC LIGHT AND POWER

YEARS	Companies	POWER STATIONS				POWER (In K—W)			Localities served
		Thermo-electric	Hydro-electric	Mixed	TOTAL	Of thermal origin	Of hydraulic origin	TOTAL	
1833.....	1	1	—	—	1	52	—	52	1
1889.....	3	2	1	—	3	3,185	4,588	7,773	3
1900.....	11	6	5	—	11	6,599	6,464	13,063	16
1910.....	88	28	60	—	88	22,173	129,989	152,162	119
1920.....	306	134	204	5	343	78,761	276,075	354,836	431
1930.....	791	337	541	13	891	127,405	567,467	694,872	1,536
1937 (1).....	1,022	531	648	—	1,179	140,405	693,601	834,006	1,993

(1) — Provisional figures.

## FOOTWEAR

THE footwear industry is one of those which have attained the greatest development in the country, according to the coefficients of production during the last two decades. This progress, however, makes itself felt in a very forceful manner as regards the technical improvement of the article, the bettering of which, not only in relation to the comfort, but also to the appearance, of the footwear, becomes more and more evident all the time. Besides this, the production area is growing larger day by day, progressively becoming more decentralized, owing to the very large number of new footwear factories installed throughout the country.

The circumstance of our having excellent raw material, *i. e.*, hides of every kind, assures to the Brazilian footwear industry one of the conditions essential for its rapid development, which, by the way, is easily verified by the statistical data available. Our hide importation figures speak for themselves, and their totals are very significant, the great increase in the amount of dressed hides and skins imported by Brazil showing very clearly the corresponding increase of our domestic needs, stressing the auspicious fact that we do not, as yet, possess a sufficient number of establishments for the proper preparation of aforesaid raw material.

According to the data obtained through the census taken in 1920, the situation of our footwear industry at that time, was as follows: number of factories — 1,319; capital invested — 49,247 contos of réis; number of workmen — 14,814; motive power — 3,491 H. P. In 1935, the statistics on the footwear industry divulge the good news that the situation of same has become greatly improved, especially in view of the circumstance that, in 1920, Brazil was under the influence of the impelling factors which, appearing on the scene as a result of the Great War, greatly speeded up the development of said branch of the National industry. Three quinquennia after above mentioned census, the number of factories was 7,719, of which 4,803 were working under the paid registration régime and 2,916 pursuant to gratuitous registry. Of the first named class, 4,257 had up to 6 workmen, 262 from 7 to 12 and 284, more than 12, or then the equivalent motive power. This means that, in 1935, the number of footwear factories in Brazil was seven times larger than that of 1920.

Brazilian footwear has always been found worthy of preference on the part of Foreigners, both owing to the comfort it gives and to its elegant appearance, being classed by experts among the best articles of the kind in the world.

## FURNITURE

THE immense resources of the Brazilian forests comprising, *inter alia*, the richest store of valuable hardwoods have greatly contributed to make the manufacture of furniture one of the most disseminated industries all over the country.

Besides the large shipments of timber exported overseas, the sawmills contributed a very appreciable share to our internal trade by means of the exportation of furniture, lumber, boxes, shingles, and numerous other products from one part of the country to another.



During the period of 1933-1935, the value of the furniture production in Brazil was ranking, according to the conclusions inferred from the revenue of the consumption tax, by classes, among the highest of our industrial centre. In contos of réis, the returns for each year of the period showed; 1933 — 115,596; 1934 — 143,864; 1935 — 151,934.

## PAPER

**T**HE paper industry is one of the most important in Brazil. It originated at the end of the last century, thanks to the initiative of the Baron de Capanema, but owes its rapid development in Brazil to the Great War, because of the difficulties which came naturally placed in the way of the importation of paper from abroad. Since then, this industry has developed in such a manner that nowadays it stands in the front rank of the great National industries.

There are at the present time 27 factories working in Brazil, with an annual production of about 100,000 tons of paper of every known quality, constituting a patrimony of more than 300,000 contos of réis, and giving employment to 20,000 workers. Large concerns are trying to produce in our country enough of the cellulose or wood pulp necessary for the manufacture of paper and these efforts will free the industry from dependence on oversea sources of supply. Parings, rags and old paper, useless for any other purpose, are used by the paper factories as excellent raw material. About 600,000 tons of this substance, in the value of 20,000 contos of réis, are annually used up by the paper factories, thus reducing the importation of cellulose. With the exception of newsprint paper, the whole of which we still import, almost all of the paper we use is made in Brazil.

### IMPORTATION OF PAPER PULP

Quantity and value, according to origin, in 1937

COUNTRY OF ORIGIN	Quantity (kilos)	VALUE	
		In milréis	Equivalent In pounds sterling
Argentina.....	101,678	63,396	...
Austria.....	24,500	22,380	...
Canada.....	739,707	951,133	...
Czecho-Slovakia.....	5,531,807	5,426,057	...
Estonia.....	1,751,899	1,539,250	...
Finland.....	7,360,177	6,757,463	...
France.....	24,651	57,579	...
Germany.....	7,390,332	6,703,194	...
Great Britain.....	5,064,394	4,261,584	...
Lithuania.....	205,618	207,902	...
Norway.....	6,856,672	5,208,413	...
Sweden.....	63,690,568	54,555,563	...
United States.....	1,231,446	1,655,210	...
TOTALS.....	99,973,449	87,409,124	664,871



## IMPORTATION OF SPECIAL QUALITY PAPER

Quantity and value, according to kind, in 1937

SPECIFICATION	QUANTITY (kilos)	VALUE (milrêls)
Cigarette paper.....	931,775	8,112,490
Wrapping paper.....	50,941	561,811
Writing paper.....	212,726	1,195,735
Vegetable, celophane and similar kinds of paper.....	14,268	205,008
Paper imitating silk, wood, Morocco leather and similar kinds of paper.....	426,981	2,472,694
Wall paper.....	3,711	87,639
News-printing paper.....	1,416,417	3,960,290
Paper prepared for office use and similar unspecified kinds of paper.....	316,098	1,293,550
Crepon and other crinkled paper.....	1,790,436	8,200,139
Ribbon paper for machines.....	80,442	467,740
Carbon, stencil and blotting-paper for office use.....	173,569	1,046,048
Unspecified paper.....	247,500	1,120,906
Pasteboard, cardboard or thin pasteboard for visiting cards and similar purposes.....	32,563	152,333
TOTALS.....	5,697,427	28,876,383

## PERFUMERY

**A**NOTHER branch of our industrial production intended for the internal markets is the preparation and manufacture of perfumes and cosmetics. A great impetus has been given to the industry and prospects for its expansion were much brighter in 1935, when the perfumery production, as estimated for purposes of consumption tax, rose to 192,458 contos of réis against 191,328 contos in the previous year and 117,807 in 1933.

## PHARMACEUTICAL SPECIALTIES

**A**MONG the Brazilian industries whose development in the last few years spell a more pronounced period of prosperity, that of pharmaceutical products deserves special reference.

At present, in some points of the country, mainly in the Federal District and São Paulo, there are pharmaceutical laboratories which honour our scientific culture.

This industry being one of the oldest in the country, is also one of those which are passing through the most complete renovation. And this is manifest not so much by the ascent verified in the number of establishments as by the successful technical improvement of some of the chemical plants. The increasing industrial activity in this direction is reflected in the steadily growing volume of the best marketable chemical products from such manufacturing laboratories.

A large part of the raw material used by our chemico-pharmaceutical industry is of national source. Experiments are even being made for the manufacture of bismuth salts with minerals from the State of Minas Gerais.

As in the case of other Brazilian industries subject to the consumption tax, in the absence of more comprehensive statistics the revenue of this levy is taken as the basis for evaluating the production of the pharmaceutical specialties. Thus, in the period of 1933-1935 the output in contos de réis was: 1933—195,177; 1934 — 157,052; 1935 — 218,346.

According to a patient enquiry carried out by private initiative, the number of pharmacies existing in Brazil ascends to more than 7,000 of which less than 3 % are of exclusive use of hospitals. Still from the same source, the total number of pharmaceutical laboratories amounts to approximately 500.

## RUBBER INDUSTRY

**T**HE rubber industry is one of the most promising in Brazil. The raw material, which is of splendid quality—the best in the world,—is National and very abundant. The domestic consumption of manufactured articles is constantly increasing. In Brazil there are 47 factories making rubber products and giving employment to about 5,000 specialized workmen, the annual output being valued at more than 45,000 contos of réis. Among the outstanding articles on the list of domestic manufactured products, we must mention rubber tires and inner tubes. The four factories in the State of Pará have a combined annual production of 52,000 rubber tires and 250,000 inner tubes. In the Federal Capital, the Companhia Brasileira de Artefactos de Borracha manufactured, in 1937, 62,589 rubber tires. Said Brazilian company has one of the most modern rubber tire plants in the world. It is able to produce rubber tires and inner tubes of the highest quality, comparable to the best on the market, according to the expressed opinion of F. A. Seiherling, founder of the Goodyear Tire & Rubber Co. of South America and now President of the Seiherling Rubber Company, of Akron, U. S. A.

Numerous small concerns are engaged in the manufacture of other articles of commerce, using rubber as the basic raw material.

## TEXTILE INDUSTRY

**T**HE textile industry in Brazil dates back to colonial times when it was already stepping out as a serious competitor to the Portuguese textiles, chiefly on account of its advantage over the latter in getting its own raw material and finding a vast home market of guaranteed consumption.

In his famous report to Minister Martinho de Mello, the Intendant of Police, Pina Manique, had already insisted on the necessity of forbidding the various weaving mills established here to continue to operate in Brazil. And this measure was really enforced in 1785 by an edict in which Queen Mary I of Portugal, invoking the pretended interest of the country, decreed the stoppage of all such mills, which were dismantled and sent to Lisbon. When the law was repealed 23 years later, the effects of the death-blow against the dawn of Brazilian industrial life had not all vanished, yet the textiles resumed their flourishing course again to receive the best attention and, in 1889, when the Republic was proclaimed, the number of establishments engaged in the industry amounted to 87 with a capital of about 240,000 contos of réis.

It was chiefly after the war that the textile industry spread rapidly in Brazil due to the fact that the internal market could not be supplied by the large European factories. The national industries were called upon to provide the needs of the country. Old establishments developed and improved their installations and new factories came into existence in the industrial field.

At present, the textile industry represents, by its organization and technical outfit, one of the most promising economizal forces in Brazil. In 1935 the number of factories operating in the country attained 735, and the establishments for the production of manufactured goods came up to a figure of 3,799. The capital invested in the industry, in 1932, amounted to 760,000 contos of réis.

The largest volume of imports relating to our spinning and weaving industrial equipment has been of bleaching, mercerising, dyeing and stamping machines, which expresses the effort of the national industry towards an ever-increasing improvement of its products.

Next to São Paulo, the Federal District and the States of Minas Gerais, Pernambuco and Alagoas may be mentioned as the principal centres of cotton textile industries.

#### TEXTILE RAW MATERIAL, PRODUCTION AND STOCK

Value, according to the Federated Units, in 1937

FEDERATED UNITS	VALUE (contos of réis)					Number of factories
	RAW MATERIAL			Production	Stock	
	National	Foreign	Total			
Pará.....	1,787	2,400	4,187	7,200	1,139	8
Maranhao.....	7,718	2,241	9,958	19,127	1,316	10
Piauí.....	—	—	—	35	17	1
Ceará.....	11,890	1,108	12,998	25,053	3,011	27
Rio Grande do Norte.....	499	300	799	1,423	463	6
Paraíba.....	8,990	155	9,145	25,136	2,475	5
Pernambuco.....	52,355	6,350	58,706	156,111	16,636	25
Alagoas.....	15,922	—	15,922	47,402	2,403	9
Sergipe.....	13,926	957	14,884	39,374	2,905	10
Baía.....	10,720	1,860	12,580	35,059	10,371	7
Espírito Santo.....	1,574	39	1,613	3,142	848	2
Rio de Janeiro.....	59,666	10,663	70,329	151,837	26,621	55
Federal District.....	86,998	48,238	135,236	351,662	43,656	79
São Paulo.....	378,629	125,133	503,761	1,349,158	148,647	708
Paraná.....	1,018	26	1,044	3,189	125	4
Santa Catarina.....	20,853	1,861	22,714	51,537	5,039	35
Rio Grande do Sul.....	28,601	3,832	32,433	71,548	12,024	26
Minas Gerais.....	58,729	4,505	63,234	145,327	13,657	72
BRAZIL.....	759,875	209,668	969,543	2,483,320	291,353	1,089

Note — The data given above correspond to 941 of the 1,089 factories registered. One hundred and forty eight factories failed to fill up and return the questionnaire.

*TRANSPORTATION*  
*AND*  
*COMMUNICATIONS*





## INTRODUCTORY

**W**ISHING to set in order, in a study of the whole matter, the several systems of communications, taking into equal consideration all the conveniences of the State, whether of an economical, political or military order, the Brazilian Government established, in a decree of June — 1934, a plan for the systematization of communications in the country.

Being a measure of great practical utility regarding a problem of such magnitude, corresponding to the principal requirements of Brazilian life in its various sectors, said Government plan had specially in view the desire to endow us with a network of highways and railways, organized in perfect harmony and in accordance with the proper spirit of co-operation, to serve the most important needs of Brazil.

Led by this criterion, having in due consideration various factors, the President, in the above mentioned plan aimed solely at establishing a reasonable equilibrium in the development of our service of communications. Accordingly, only purely National conveniences and the best interests of the country were made objet of his policy.

In its fundamental lines, here we have the plan of the above mentioned decree:

*A) — Trunk-lines in the direction of the meridians: 1) From Fortaleza to Rio de Janeiro, following the litoral; 2) From São Luiz do Maranhão to Rio de Janeiro; 3) From Belem (Pará) to Rio de Janeiro; 4) From Santarem to Ponta-Porã; 5) From Itacoatiara to the mouth of the Rio Apa; 6) From Rio de Janeiro to Porto Alegre, along the coast across the mountain ranges; 7) From Rio de Janeiro to the port of Rio Grande; 8) From São Borja to Quaraim.*

*B) — Trunk-lines following the parallels: 1) From Belem (Pará) to Tabatinga; 2) From Recife (Pernambuco) to Belem (Pará); 3) From Recife (Pernambuco) to Santa Maria do Araguaia; 4) From Salvador (Baía) to Goiaz; 5) From Rio de Janeiro to Cruzeiro do Sul; 6) From Rio de Janeiro to Curumbá; 7) From Rio de Janeiro to Bela Vista; 8) From Rio de Janeiro to the mouth of the Iguassú; 9) From Porto Alegre to Uruguaiana; 10) From Porto Alegre to Sant'Ana do Livramento; 11) From Rio Grande to Uruguaiana.*

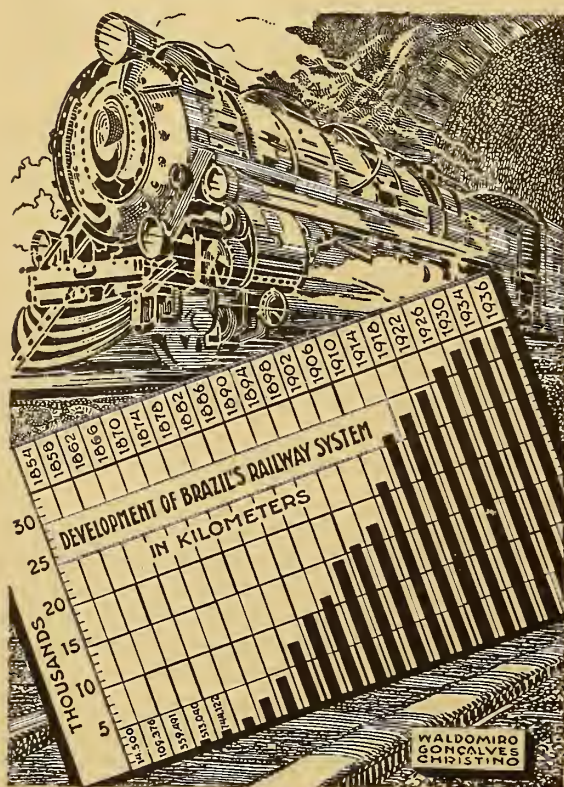
*C) — Inter-connection of the trunk-lines: 1) Fortaleza — Crateus; 2) Fortaleza — Joazeiro, via Giranê, Cedro, Salgueiro and Terra Nova; 3) Esperança to Sardinha; 4) Bomfim to Agua Comprida, via Alagoinha; 5) Joazeiro to Pirapora; 6) Santa Maria do Araguaia to Registro do Araguaia; 7) Cuiabá to São Luiz de Cáceres; 8) Colatina to General Carneiro; 9) Belo Horizonte to Ameri-*

cana, via Lavras, Campinas and Boituva; 10) São Paulo to Santos; 11) Penapolis to Taguariana, passing by Assiz and Ourinhos; 12) Cupis to Guaiara, passing by Presidente Epitacio; 13) Mafra to União da Vitoria; 14) Ilhota to Uru-guai, via Canoas; 15) Bento Gonçalves to Passo Fundo; 16) São Sepé to São Borja, via Dilermando de Aguiar; 17) Basilio to Jaguarão; 18) Alegrete to Quairaim.

## RAILWAYS

THE Brazilian railway system may be described under three fundamental aspects: — *I* — Specific classification; *II* — Regional classification; *III* — Economic classification.

We shall here consider the subject only under the second and third aspects.



Brazil comprehends four great regions, characterized by "railway density", i. e., the greater or lesser extent of their respective railroad systems, which show, in their turn, the larger or smaller economic development of the region.

*The North* — Comprehending the basins of the Amazon and the Paranaíba as well as those of the rivers between them excepting the part of the Tocantins basin to the South of parallel 14 and the small part of the Paranaíba basin which belongs to the State of Ceará. This vast region, very poor in railways, but almost entirely covered by a network of navigable rivers, contains the Territory of Acre, the whole of the States of Amazonas, Pará, Maranhão and the greater part of the State of Piauí, be-

sides the North of the States of Goiás and Mato Grosso.

*The North-East* — Limited on the West by above mentioned region and the boundary between the Tocantins and the São Francisco rivers, as far as aforementioned parallel 15, and on the South by said parallel. This region is constituted by the States of Ceará, Rio Grande do Norte, Paraíba, Pernambuco. Alagoas, Sergipe, the part of Bahia referred to above and a small zone in the North of Minas Gerais.



*The South-East* — Limited on the North by aforesaid parallel 15 and on the South by the Northern boundary of the State of Paraná. This region, one of the best served by railways, has the two most important ports in Brazil and is constituted by the Federal District, States of Espírito Santo, Rio de Janeiro, São Paulo, almost all of the State of Minas Gerais and the Southern part of the States of Baía, Goiaz and Mato Grosso.

*The South* — Limited on the North by the preceding one, comprehends the States of Paraná, Santa Catarina and Rio Grande do Sul.

For the effect of economic classification, public service railways, in Brazil, are respectively of the first, second and third categories, their gross annual revenue being; a) more than 20,000 contos of réis; b) between 20,000 and 5,000 contos of réis; and c) less than 5,000 contos of réis. There are 11 of the first category, 4 of the second and 41 of the third.

Pursuant to our railway organization public service railway may be superintended by private parties, States, or by the Union. Among the latter, which are, by the way, in the majority, we have the Estrada de Ferro Central do Brasil (Central of Brazil Railway), Estrada de Ferro Noroeste do Brasil (The North-West of Brazil Railway), Estrada de Ferro Central do Rio Grande do Norte (Central Railway of Rio Grande do Norte), Estrada de Ferro Central do Piauí (Central Railway of Piauí), Rede de Viação Cearense (The State of Ceará Railway System), Estrada de Ferro São Luiz — Teresina (São Luiz — Teresina Railway), Estrada de Ferro Petrolina — Teresina (Petrolina — Teresina Railway) and the Estrada de Ferro Goiaz (Goiaz Railway).

The last six on the list given above serve zones of little demographic density and limited economic resources, but which have, however, received several favours from the Government, that have greatly improved their traffic conditions. The Estrada de Ferro Noroeste do Brasil (The North-West of Brazil Railway), which connects the States of São Paulo and Mato Grosso, crossing a zone of great economic potentiality, is going to be prolonged, so as to reach the Bolivian system, this being a measure producing excellent results as regards the proper development of such promising regions.

All the railways administered by the Federal Government have been found worthy of receiving, during the last decennium, vigilant and continuous assistance, both as regards their tracks and their rolling stock, this bringing about a great improvement in their traffic conditions. Greater in extent and importance, however, were the modifications made in the system of the Estrada de Ferro Central do Brasil (Central of Brazil Railway), which is evidently a railroad of the highest importance in Brazil, owing to the fact that it connects the Capital of the Republic with the State of São Paulo and other States of the South, that is to say, with the centers of agricultural and industrial production of the country. Among said modifications, we must give an outstanding place to those which modified completely and radically the system of the suburban traffic, by the electrification of the track between the Pedro II and Madureira stations, said stretch of the railroad now having a safe, comfortable, rapid and economical means of transportation. The average daily movement over the lines of the Estrada de Ferro Central do Brasil (Central of Brazil Railway) is 1,150 trains, there having been transported, during 1937: 91,800,842 passengers, 3,617,788 tons of merchandise, 285,694 tons of parcels and 383,000 animals. The total extent of its lines is 3,168 kilometers and the system has altogether 614 stations. The rolling stock includes 800 locomotives, 1,200 passenger cars and 8,000 freight cars.



## RAILWAY SYSTEM DEVELOPMENT

Number of kilometers per annum, during the 1854-1936 period

YEARS	KILOMETERS	YEARS	KILOMETERS
1854 .....	14,500	1896 .....	13,576,698
1856 .....	16,190	1898 .....	14,664,300
1858 .....	109,376	1900 .....	15,316,400
1860 .....	222,696	1902 .....	15,680,400
1862 .....	359,491	1904 .....	16,305,857
1864 .....	474,337	1906 .....	17,242,457
1866 .....	513,040	1908 .....	18,632,655
1868 .....	717,626	1910 .....	12,325,501
1870 .....	744,122	1912 .....	23,491,382
1872 .....	932,154	1914 .....	26,062,268
1874 .....	1,283,877	1916 .....	27,014,534
1876 .....	2,122,407	1918 .....	27,706,034
1878 .....	2,708,925	1920 .....	28,534,921
1880 .....	3,397,872	1922 .....	29,341,128
1882 .....	4,464,331	1924 .....	30,305,714
1884 .....	6,302,094	1926 .....	31,332,759
1886 .....	7,555,664	1928 .....	31,851,220
1888 .....	9,320,887	1930 .....	32,478,007
1890 .....	9,973,087	1932 .....	32,972,680
1892 .....	11,315,898	1934 .....	33,076,769
1894 .....	11,260,398	1936 .....	33,521,080

Extent of the system in traffic, under construction and studied, according to the composition of same during the 1936 period (on December 31)

SPECIFICATION		EXTENT (meters)		
		In traffic	Under construction	Studied
TOTALS .....		33,521,080	1,031,118	8,858,838
According to the rail-ways	Estrada de Ferro Madeira-Mamoré .....	366,485	—	—
	Estrada de Ferro Tocantins .....	82,430	—	325,480
	Estrada de Ferro Corotá-Tocantins .....	—	—	105,000
	Estrada de Ferro Bragança .....	293,729	5,740	—
	Estrada de Ferro São Luiz-Teresina .....	450,652	—	—
	Estrada de Ferro Central do Piauí .....	147,578	43,400	131,860
	Rede Viação Cearense .....	1,368,305	174,792	595,995
	Estrada de Ferro Mossoró .....	157,667	40,700	—
	Estrada de Ferro Central do Rio Grande do Norte .....	221,120	113,000	82,582
	Estrada de Ferro Petrolina-Teresina .....	189,294	15,000	574,240
	Great Western of Brazil Railway Co. Ltd .....	1,741,537	16,870	766,814
	Estrada de Ferro Barreiros-Sertãozinho .....	—	—	35,420
	Viação Férrea Federal Leste Brasileiro (1) .....	1,797,161	218,985	1,381,127
	Estrada de Ferro Baía a Minas .....	536,514	44,730	377,600
	Estrada de Ferro Nazaré e Ramal de Amargoso .....	286,513	24,000	71,280
	Estrada de Ferro Nazaré a Salinas de Margarida .....	—	—	47,420
	Estrada de Ferro Santo Amaro .....	90,020	42,000	—
	Estrada de Ferro Ilheus a Conquista .....	127,759	—	32,585
	Estrada de Ferro Vitória a Minas (1) .....	561,594	4,892	176,905
	Estrada de Ferro Itapemirim .....	52,740	—	—

Extent of the system in traffic, under construction and studied, according to the composition of same during the 1936 period (on December 31)

SPECIFICATION	EXTENT (meters)		
	In traffic	Under construction	Studied
Estrada de Ferro Litoral.....	13,605	22,072	88,079
Estrada de Ferro São Mateus.....	63,000	5,000	—
Estrada de Ferro Beneventes a Alfredo Chaves.....	35,710	—	—
Estrada de Ferro Corcovado.....	3,824	—	—
Estrada de Ferro Maricá.....	130,472	26,000	—
The Leopoldina Railway Company, Ltd.....	3,086,388	—	54,160
Estrada de Ferro Central do Brasil.....	3,168,573	—	403,997
Rede Mineira de Viação (2).....	3,779,591	183,185	81,149
Estrada de Ferro Gandarela.....	—	—	51,060
Estrada de Ferro Morro Velho.....	8,000	—	—
Estrada de Ferro Itaunas.....	—	20,000	105,000
Estrada de Ferro Caracol.....	—	25,000	—
Estrada de Ferro Goiaz.....	438,429	28,000	30,000
Cia. Mogiana de Estrada de Ferro.....	1,958,821	—	176,124
São Paulo Railway Co. Ltd.....	247,314	—	—
Cia. Paulista de Estrada de Ferro.....	1,497,174	—	45,000
Estrada de Ferro Sorocabana.....	2,100,207	45,214	183,000
Estrada de Ferro Noroeste do Brasil.....	1,397,076	35,045	28,584
Estrada de Ferro Dourado.....	276,000	12,000	76,240
Estrada de Ferro São Paulo-Goiaz.....	148,882	—	—
Estrada de Ferro Oeste de São Paulo.....	—	63,000	—
Cia. Estrada de Ferro Morro Agudo.....	40,858	—	—
Estrada de Ferro São Paulo-Minas.....	180,320	—	—
Estrada de Ferro Piquete-Itajubá.....	—	—	25,626
Estrada de Ferro Uberaba-Vila Platina.....	—	—	275,423
Estrada de Ferro São Paulo-Paraná.....	236,276	—	—
Cia. Estrada de Ferro Barra Bonita.....	18,440	—	—
Estrada de Ferro Itatibense.....	20,120	—	—
Estrada de Ferro Araraquara.....	300,347	—	31,200
Ramal Férreo Campineiro.....	39,553	—	—
Tramway da Cantareira.....	35,199	—	—
Estrada de Ferro Campos de Jordão.....	46,670	—	—
Cia. Melhoramentos de Monte Alto.....	31,350	—	—
Estrada de Ferro Jaboticabal.....	25,083	—	14,500
Estrada de Ferro Perús-Pirapora.....	16,140	—	30,000
Ramal Férreo Dumont.....	23,442	—	—
Estrada de Ferro Oeste do Paraná.....	—	68,000	21,000
Rede Paraná-Santa Catarina.....	2,006,239	40,225	901,999

According to the rail-  
ways (continued)

Extent of the system in traffic, under construction and studied, according to the composition of same during the 1936 period (on December 31)

SPECIFICATION		EXTENT (meters)				
		In traffic	Under construction	Studied		
According to the rail-ways (concluded)	Estrada de Ferro Itararé-Fartura.....	—	—	145,000		
	Estrada de Ferro Norte do Paraná.....	43,300	—	134,622		
	Estrada de Ferro D. Teresa Cristina.....	243,858	10,707	59,646		
	Estrada de Ferro Santa Catarina.....	107,463	82,013	212,813		
	Estrada de Ferro Mate Laranjeira.....	68,000	—	—		
	Vição Férrea Federal do Rio Grande do Sul.....	3,086,774	271,548	340,009		
	Cruz Alta-Porto Lucena railway extension.....	—	—	50,000		
	Estrada de Ferro São Pedro-Pelotas.....	—	—	466,800		
	Alegrete-Quaraim railway extension.....	—	—	20,600		
	S. Sebastião-Santana do Livramento railway extension..	—	—	102,900		
	Estrada de Ferro Porto Alegre a Tristeza.....	13,770	—	—		
	Estrada de Ferro do Jacuí.....	67,414	—	—		
Estrada de Ferro de Palmares a Osorio (3).....	56,300	—	—			
According to gauge	Standard gauge (1m.).....	29,992,620	1,582,378	8,685,407		
	Broad gauge (1.60 m.).....	2,075,916	—	62,282		
	Narrow gauge (0.76 m.—0.66 m.—0.60 m.).....	1,452,544	98,740	111,149		
According to specific classification	Federal railways	Owned by the Union	Administered by the Union...	12,637,357	744,917	5,879,813
			Leased to States.....	6,882,263	605,023	1,460,430
			Leased to private parties.....	2,200,476	—	—
	Conces-sion granted by the Union		With interest guarantee.....	1,519,699	4,892	176,905
			Without guarantee or subsidy	876,369	—	316,764
	State rail-way	Owned and administered by States.....	3,185,646	158,286	478,559	
		Concessions granted by States.....	6,219,270	168,000	646,367	
According to regional classification	North.....	1,340,874	49,140	662,340		
	North-East.....	6,979,376	645,347	3,587,463		
	South-East.....	20,517,712	514,138	2,398,647		
	South.....	5,683,118	472,493	2,310,388		
According to economic classification	Of the 1st. category.....	24,069,694	692,087	2,980,836		
	Of the 2nd. category.....	4,027,407	398,669	2,185,227		
	Or the 3rd. category.....	5,423,979	690,362	3,692,775		

(1) Construction work suspended

(2) Including the Machadense (40,340 kms.), the Trespontana (20,000 kms.) and the branch line denominated Ramal de São Gonçalo.

(3) Formerly only as far as Conceição do Arroio.

## Distribution of the system in traffic, according to the Federated Units, in 1936

FEDERATED UNITS	EXTENT						
	ABSOLUTE (meters)				RELATIVE		
	Railways of the 1st. category	Railways of the 2nd. category	Railways of the 3rd. category	Total	%	Meters per Km. 2 of territory	Meters per 1,000 inhabitants
Amazonas.....	—	—	5,087	5,087	0.01	0.003	11.5
Pará.....	—	—	376,159	376,159	1.12	0.3	244.0
Maranhão.....	—	—	450,652	450,652	1.34	1.3	378.7
Piauí.....	—	—	185,216	185,216	0.55	0.8	218.2
Ceará.....	—	1,239,947	—	1,239,947	3.70	8.3	740.5
Rio Grande do Norte.....	120,600	—	378,787	499,387	1.49	9.5	638.7
Paraíba.....	361,197	128,358	—	489,555	1.46	8.8	349.9
Pernambuco.....	912,967	—	151,656	1,064,623	3.18	10.7	353.7
Alagoas.....	346,773	—	—	346,773	1.03	12.1	284.0
Sergipe.....	—	302,658	—	302,658	0.90	14.0	543.5
Baía.....	—	1,494,503	650,936	2,145,439	6.40	4.1	503.0
Espírito Santo.....	402,728	205,580	165,055	773,363	2.31	17.3	1,088.8
Rio de Janeiro.....	2,536,284	—	130,472	2,666,756	7.96	62.9	1,285.7
Federal District.....	139,316	—	3,824	143,140	0.43	122.7	81.5
São Paulo.....	6,150,818	300,347	878,328	7,329,493	21.87	29.6	1,078.5
Paraná.....	1,167,252	—	340,705	1,507,957	4.50	7.5	1,449.1
Santa Catarina.....	834,987	—	351,321	1,186,308	3.54	12.5	1,171.8
Rio Grande do Sul.....	3,086,774	—	127,484	3,214,258	9.59	11.3	1,030.5
Mato Grosso.....	808,950	—	361,398	1,170,348	3.49	0.8	3,133.3
Goiás.....	—	—	385,707	385,707	1.15	0.6	510.2
Minas Gerais.....	7,201,048	356,014	481,192	8,038,254	23.98	13.5	1,043.0
<b>BRAZIL.....</b>	<b>24,069,694</b>	<b>4,027,407</b>	<b>5,423,979</b>	<b>33,521,080</b>	<b>100.00</b>	<b>3.9</b>	<b>790.7</b>

## Summary of the transportation of passengers and animals, according to the specific classification of the Railways in 1936

SPECIFICATION	PASSENGERS				ANIMALS			
	NUMBER		PASSENGERS (kilometers)		HEAD		HEAD (kilometers)	
	Thousands	%	Thousands	%	Thousands	%	Thousands	%
<b>FEDERAL RAILWAYS</b>								
Federal property { Administered by the Union.....	98,935	59.81	2,513,112	53.13	755	20.99	295,619	33.55
Leased.....	7,692	4.65	487,314	10.30	577	16.05	150,025	17.02
Concessions granted by the Union	38,369	23.20	653,896	13.83	821	22.83	53,058	6.02
<b>STATE RAILWAYS</b>								
Property of, and administered by, States.....	10,003	6.05	382,596	8.09	652	18.13	162,910	18.49
Concessions granted by the States	10,399	6.29	693,124	14.65	791	22.00	219,590	24.02
<b>TOTALS.....</b>	<b>165,398</b>	<b>100.00</b>	<b>4,730,042</b>	<b>100.00</b>	<b>3,596</b>	<b>100.00</b>	<b>881,202</b>	<b>100.00</b>
Summary of the previous quinquennium { 1935.....	166,931	100.93	4,561,330	96.43	3,408	94.77	827,429	93.90
1934.....	155,758	94.17	4,122,465	87.15	3,283	91.30	620,187	70.38
1933.....	145,553	88.00	4,096,951	86.62	2,940	81.76	690,873	78.40
1932.....	134,884	81.53	3,734,461	78.95	2,672	74.30	602,512	68.37
1931.....	145,491	87.96	4,473,000	100.00	2,288	63.63	539,225	61.19

Note—In 1936 there were not computed the data on 10 railways of the 3rd category: Tocantins, Jacui, Santo Amaro, Itapemirim, Litoral, São Mateus, Beneventes, Porto Alegre to Tristeza, and Mate Laranjeira.  
The figures showing the movement during the preceding quinquennium do not include data on some of the railways of the 3rd category.



**Summary of the transportation of baggage, parcels and freight, according to the specific classification of the railways in 1936**

SPECIFICATION	BAGGAGE AND PARCELS				FREIGHT			
	TONS		TON — KILO-METERS		TONS		TON — KILO-METERS	
	Thousands	%	Thousande	%	Thousande	%	Thousande	%
<b>Federal Railways</b>								
Federal property { Administered by the Union.....	359	37.91	66,382	47.54	6,272	21.90	1,583,671	32.65
Leased.....	119	12.56	15,913	11.40	4,430	15.47	817,401	16.85
Concessions granted by the Union.....	187	19.75	10,893	7.80	8,046	28.10	536,688	11.06
<b>State Railways</b>								
Property, of, and administered by, the States.....	68	7.13	13,180	9.44	4,157	14.52	914,309	18.85
Concessions granted by the States.....	214	22.60	33,265	23.82	5,731	20.01	998,885	20.59
<b>TOTALS.....</b>	<b>947</b>	<b>100.00</b>	<b>139,633</b>	<b>100.00</b>	<b>28,636</b>	<b>100.00</b>	<b>4,850,954</b>	<b>100.00</b>
<b>Summary of the previous quinquennium</b>								
{ 1935.....	828	87.43	128,581	92.08	26,231	91.60	4,517,858	89.01
{ 1934.....	788	83.21	119,805	85.80	23,203	81.03	3,696,661	76.20
{ 1933.....	802	84.69	135,592	97.11	22,245	77.68	3,553,802	73.26
{ 1932.....	874	92.29	107,561	77.03	20,411	71.28	3,404,019	70.17
{ 1931.....	735	77.61	135,668	97.16	20,725	72.37	3,569,863	73.59

Note — In 1936 there were not computed the data on 10 railways of the 3rd category: Tocantins, Jacuí, Santo Amaro, Itapemirim, Litoral, São Mateus, Beneventes, Porto Alegre to Tristeza, Morro Velho and Mate Laranjeira.

The figures showing the movement during the preceding quinquennium do not included data on some of the railways of the 3rd category.

## HIGHWAYS

IN 1937 the Federal highway services were still of a precarious character, under the superintendency of the Federal Highways Commission. But in July of said year, the Commission was dissolved, there having been created, in its place, the National Highways Department, charged with the duties of constructing all the Federal highways and of keeping same in a perfect state of conservation; it has also to elaborate and periodically review the National Highways Plan.

There having been chosen a certain number of technical engineers, entrusted with the duty of elaborating the general plan of construction of the Federal highways, same being able to execute, as they please, any of the works, within the limits of the budget appropriations for the respective services, the Federal Highways Commission was able to adopt a criterion of strict administration, quite free from any injunction but that of the legitimate interests of the country.

Faithful to this programme and according to the directions traced, said Department is quite prepared to execute the task ascribed to it,— that of endowing Brazil with a vast network of highways equally distributed throughout the States of the Union, so as to give an impulse to the harmonious development of our productive sources, constituting a new agent of cohesion on behalf of the National unity.

Even without taking into consideration the numerous works of the States and municipalities greatly improving the Brazilian highway system, in every di-

rection of our geographical extent, it is well to stress here some of the initiatives that are very significative for said system. For instance: The Areias — Ca-xambú highway connects up the famous Rio — São Paulo trunk-road and the hydropathic stations in the South of Minas Gerais. This highway is very im-portant because it makes very easy the access to aforesaid region; it effects a junction with the Rio — São Paulo trunk-road at a point almost equidistant from the two principal Brazilian Cities, viz — 218 kilometers from Rio de Ja-neiro and 219 from São Paulo.

In 1933 there were taken the first steps for the connecting up of Rio de Janeiro and Baía by means of a highway, the first between the Capital of the Republic and the North — East, utilizing the Salvador — Fortaleza highway, in the State of Ceará. After long and careful studies, the plan of this great highway, with a length of 1912 kilometers, was approved.

In 1936, preliminary work was done for the opportune making of a highway, linking Rio de Janeiro to the Capital of Rio Grande do Sul,— this being a trunk-road which will greatly contribute to the expansion of regions, the economic development of which is already remarkable. This great highway, estimated to be approximately 1,725 kilometers long, is practically completed, construction work having already been done as far as Curitiba, in the State of Parana, 1,012 kilometers from the starting point.

The National Highways Department adopted the criterion of executing all the work in its charge by direct administration, thus permitting a more careful execution of the various services.

In the 1931 — 1938 period, the budget appropriations for such purposes reached the sum of 90,046:220\$000 (ninety thousand and forty six contos, two hundred and twenty milréis).

### IMPORTATION OF AUTOMOBILES

Quantity and value, according to make, in 1937

MAKE AND ORIGIN		NUMBER	VALUE (milréis)
Passenger cars.....	Austria.....	8	115,101
	Czecho-Slovakia.....	29	368,677
	France.....	84	884,704
	Germany.....	1,584	18,054,922
	Great Britain.....	15	219,166
	Italy.....	117	945,210
	Sweden.....	1	18,995
	United States.....	12,514	126,426,274
	Uruguay.....	1	11,258
	TOTALS.....	14,353	147,044,307
Trucks.....	Germany.....	86	3,221,328
	Great Britain.....	2	12,745
	United States.....	98	2,185,182
	TOTALS.....	186	5,419,255
Passenger car chassis....	France.....	4	25,800
	Germany.....	4	26,865
	United States.....	78	718,966
	TOTALS.....	86	771,631
Truck chassis.....	France.....	11	150,978
	Germany.....	364	10,594,752
	Great Britain.....	60	2,316,155
	Sweden.....	71	2,123,569
	Switzerland.....	1	70,543
	United States.....	10,425	96,036,855
	TOTALS.....	10,932	111,292,852
	GRAND TOTAL.....	25,557	264,528,045



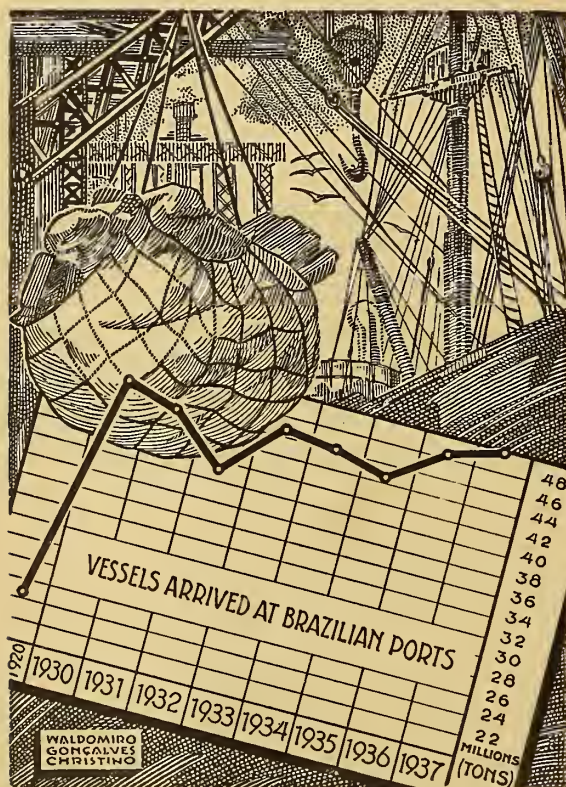
## PORTS AND NAVIGATION

**I**MPORTANT reforms have been made during the last few years, in the harbour services of the country. The two administrative organs that superintended them were united and their duties transferred to the National Department of Ports and Navigation, which became a body of

greater amplitude, falling on same the task of elaborating and executing the installation of new ports and to effect the improvements of those already existing and of the navigable rivers, as well as to supervise the commercial exploitation of our port equipment.

Besides the work done to put the several ports of the country in a condition to correspond to the purposes for which they are intended, by means of improvements and reforms in their installations, other measures of an administrative order were taken, all of them attaining the most auspicious results, as regards the good order, efficiency and regularity of the service.

There was also carried out a complete revision of Brazilian port legislation, new ordinances having been issued, capable of better



corresponding to the requirements of the moment and neutralizing the difficulties created by empirical and anachronic laws.

Decree N. 24,599, for instance, of June, 1934, came to substitute the legislative orderings of old times — 1869 and 1896. Remedying the faults of the primitive legislation with rules for the bettering of the port installations, on the conclusion of the initial schemes, the above mentioned decree permitted the collaboration of the States with the Union for the execution of such improvements, providing still other measures concerning the régime of accounts and amortization of the capital invested in the works, the terms of which were ad-journed to facilitate the payments and the development of the services.

The perfect definition of the services under the charge of the port administrations; the settlement of a basis to make the ports uniform, as to their kinds, incidence and denomination; the adoption of new tariffs and conditions for the the collection of warehouse dues; the organization of new tables for taxes in

the several ports of the country, it being, since then, settled that, although they had been established according to the legislation in force, they would be periodically reviewed, pursuant to the interests of the port organizations and of the interested classes; the revision and arrangement of the new conditions in the contracts of concessions,—all these measures and several others were taken, from 1930 on, for the effect of affording greater facilities to the import and export trade and to maritime transportation.

Patriotically engaged in the organization of our merchant service, the Government took over the direction of the "Lloyd Brasileiro" (Brazilian Lloyd Steamship Line), which was requiring another system and control for better results on behalf of the Nation.

With an antiquated fleet, in precarious state of conservation said concern was wanting, for its integral restoration, energetic and well chosen steps such as those taken by the Public Authorities. The improvements in every sector of the above mentioned steamship company, are really shown by the extraordinary increase in the revenue, which is the proof of the results attained.

To endow the "Lloyd Brasileiro" with a modern fleet, in a condition to serve the maritime traffic, 27 new ships will be acquired, the construction of which is to be obtained in groups. The first steps for the purchase of two steamers have already been taken, both of them with the most modern equipment.

These measures, of evident importance, will complete the series which originated the alterations in the administration of the "Lloyd Brasileiro" and the repairing and improvement of the installations and machines of its vessels already in traffic, marking out a great conquest in the struggle for raising the national merchant service above its oldtime level.

Brazilian products are exported through the numerous seaports and those on the banks of the great rivers of Brazil.

Statistics mention 138 ports on the coast and more than 200 fluvial ones. Only 53 of said ports, however, are of major importance, same being distributed as follows among the States of the Union:

Amazonas, 3; Pará, 4; Maranhão, 3; Piauí, 1; Ceará, 3; Rio Grande do Norte, 3; Paraíba, 2; Pernambuco, 1; Alagoas, 1; Sergipe, 1; Baía, 7; Espírito Santo, 2; Rio de Janeiro, 5; Federal District, 1; São Paulo, 5; Paraná, 2; Santa Catarina, 5; Rio Grande do Sul, 3; Mato Grosso, 1.

Fourteen of said ports are organized and are being commercially exploited, directly by local entities, or under the control of the Government of the Union. They have altogether 26,116 meters of quay frontage, 453 cranes of various lifting capacities, 475 swing bridges, 193 warehouses with a total area of 529,379 square meters and 188,722 meters of dock railway lines. Six of aforesaid ports are still under construction and various others are only projected or being studied. The study, drawing up of projects and construction of ports is subject to the direct control of the Government, through the "Departamento Nacional de Portos e Navegação" (National Department of Ports and Navigation), of the "Ministério da Viação e Obras Públicas" (Ministry of Communications and Public Works).

At the present time this Department is developing its activities in various parts of the country. The 1938 programme includes work to be done, not only on the coast, but also in the interior zones, watered by navigable rivers.

Aforesaid Department is acquiring dredging material, as well as studying the possibility of mounting a hydro-technical laboratory.



The work now being done as a result of above mentioned programme, is as follows: — construction of the port of Fortaleza (Ceará); amplification of the port of Natal (Rio Grande do Norte); continuation of the work at Belmonte (Baía), Maceió (Alagoas), Vitória (Espírito Santo), Cabo Frio (State of Rio de Janeiro) and São Sebastião (São Paulo); continuation of the improvement work on the bars at Irajá and Laguna (Santa Catarina), Pelotas and São Borja (Rio Grande do Sul); continuation of the work at Itaparica (Baía) and on the canals of São José (Piauí) and Goiana (Pernambuco); dredging of the port of São Luiz (Maranhão); improvements on the São Francisco (Baía), Iguassú (Paraná), Itajaí-Assú, Cachoeira and Tubarão (Santa Catarina) rivers, and dredging of lake Mirim and Jaguarão river (Rio Grande do Sul).

We will now give a list of the principal ports of Brazil and their respective characteristics:

*Port of Manaus* — Situated on the left bank of the Negro River and in the capital of the State of Amazonas, it is the principal fluvial port of Brazil. It is 1,509 kilometers from the port of Belém (Pará), that is to say about 1,600 kilometers from the ocean. The wharves are of the floating type with a total frontage of 1,313m.97, divided up as follows: — a T shaped Rodway floating landing stage, connected to the shore by a floating bridge and having 508m.7 available docking space for large and small vessels; another floating landing stage connected to the shore by three aerial cables for the transportation of merchandise, with the necessary towers and 568.08 available docking space; and, finally, an L shaped floating landing stage, with 243m.82 available landing stage docking space. The last named one is specially intended for loading regional produce, such as rubber and nuts. Under direct Federal Government control, the port of Manaus concession is held by the Manaus Harbour Company. The following are its principal characteristics:

Depth of dock at low water.....	20 meters
Maximum tide variation.....	15 »
Depth of the entrance channel at low water.....	20 »
Width of evolution basin.....	1,600 »
Width of accessible channel.....	300 »
Total number of warehouses.....	9 »
Total area occupied by the warehouses.....	14,450 m <sup>2</sup> .
Electric cranes of from 1½ to 20 tons.....	12
Floating crane, lifting capacity: 10 tons.....	1

*Port of Belém (Pará)* — On the right side of Guajará Gay, in the City of Belém, Capital of the State of Pará, 140 kilometers from the ocean. The docks, are of the heavy type, *i. e.*, made of concrete blocks on a rocky foundation, and have an available docking frontage of 1,860 meters. The port has the following characteristics:

Depth of entrance channel at low water.....	9 meters
Width of entrance channel.....	120 to 250 »
Width of evolution basin.....	250 »
Depth of quays at low water.....	10 to 3 »
Maximum tide variation.....	4m, 32
Number of warehouses.....	8
Total area occupied by warehouses.....	24,860m <sup>2</sup> .00
Warehouses for inflammables.....	3
Area occupied by the warehouses for inflammables...	10,740m <sup>2</sup> .00

Electric cranes of from 3 to 5 tons.....	15
Steam cranes of from 5 to 30 tons.....	8
Floating or stationary 30 ton cranes.....	3

*Porto of Natal*— Situated on the right bank of the estuary of the Potengi and Jundiá rivers, in the City of Natal, Capital of the State of Rio Grande do Norte, about 3 kilometers from the Picão lighthouse, at the entrance to the bar. It has a total quay frontage of 200 meters. The docks are built of reinforced concrete blocks on an under-structure of steel piles strengthened by girders of the same metal, with concrete casing. This port is under the direct administration of Federal Government agents. Its principal characteristics are as follows:

Depth of the quays at low water .....	6m. 40
Depth of the entrance channel at low water.....	6m. 00
Maximum tide variation.. .....	3m. 82
Width of the entrance channel .....	120 to 220m.00
Average width of the estuary.....	700m. 00
Number of warehouses.....	2
Area occupied by the warehouses.....	4,952m <sup>2</sup> .00
Steam cranes with lifting capacity up to 5 tons.....	4
Floating crane with 40 tons lifting capacity.....	1

*Port of Cabedelo*— On the left bank of the Paraíba river, 1,500 meters from the ocean, at Cabedelo, in the State of Paraíba, 17 kilometers from the City of João Pessoa, Capital of the State. It has a quay frontage of 400m.20 with an under-structure of steel piles. The port is being duly exploited by the State Government, under the control of the Federal Government. The following are its principal characteristics:

Depth of the entrance channel at low water.....	8m. 00
Width of the entrance channel.....	100m. 00
Width of evolution basin.....	300m. 00
Maximum tide variation.....	3m. 42
Depth of quays at low water.....	8m. 00
Number of warehouses.....	4
Area occupied by the warehouses.....	10,538m <sup>2</sup> .22
Electric cranes of from 1½ to 5 tons lifting capacity...	5
Swing bridges for the service of the warehouses.....	5

*Port of Recife (Pernambuco)*— Situated in the estuary formed by the Capiberibe and Beberibe rivers, in the City of Recife, Capital of the State of Pernambuco. The total quay frontage is 2,270m.18. The docks are built of reinforced concrete blocks on a rocky foundation. The Concessionaire is the State Government. The following are the principal characteristics of the port:

Depth of the channel at low water.....	10m. 00
Depth of the docks at low water.....	8m,00 to 10m. 00
Width of the entrance channel.....	260m. 00
Width of evolution basin.....	430m,00 to 520m. 00
Maximum tide variation.....	3m. 10
Number of warehouses.....	16
Area occupied by the warehouses.....	41,343m <sup>2</sup> .00
Electric cranes of from 1½ to 23 tons lifting capacity	50
Floating crane, lifting capacity: 60 tons.....	1

*Port of Baía* (Baía)—In the Bay of All Saints 5.5 kilometers from the ocean, in the City denominated Salvador, Capital of the State of Baía. It has a quay frontage of 1,480m.0. Low water depths of the different docks vary between 2m.20 and 10m.0. The docks are constructed of reinforced concrete blocks on a rocky foundation. The port is exploited by the corporation denominated "Companhia Concessionária das Docas do Porto da Baía", subject to the control of the Federal Government. We give below the port's principal characteristics:

Depth of the entrance channel at low water.....	10m. 00
Width of the entrance channel.....	200m. 00
Width of evolution basin.....	420 to 520m. 00
Maximum tide variation.....	3m. 18
Number of warehouses.....	10
Area occupied by the warehouses.....	25,358m <sup>2</sup> .00
Electric cranes of from 1½ to 3 tons lifting capacity.....	17
Steam cranes with lifting capacity up to 3 tons.....	5
Floating crane with a lifting capacity of 100 tons.....	1

*Port of Ilhéus*—Situated on the right bank of the Cachoeira river, in the City of the same name, in the State of Baía. It has 4 mooring pontoons. 3 being *T* shaped and one *L* shaped, with a total docking frontage of 454m.0. The company denominated Companhia Industrial de Ilhéus, under the control of the Federal Government, is the Concessionaire of the port, whose principal characteristics are as follows:

Depth of the entrance channel at low water.....	3m. 30
Depth of evolution basin at low water.....	2m,50 to 5m. 00
Width of the entrance channel.....	250m. 00
Width of evolution basin.....	750m. 00
Maximum tide variation.....	2m. 40
Number of warehouses.....	5
Area occupied by the warehouses.....	5,555m <sup>2</sup> .00

*Port of Rio de Janeiro*—The principal port of Brazil. Situated in the City of the same name, which is the Capital of the Republic, in the South-Western part of the Bay of Guanabara. It has 4,690m.00 of dock frontage with low water depths varying between 8m.50 and 10m.00. The quays are of the heavy rock type, constructed on the compressed air chamber foundation system, part of the frontage being continuous and part arch work. Exploitation of the port is in charge of an autonomous body composed of representatives of the Government and of the entities directly interested in shipping matters, such as the "Associação Comercial" (Commercial Association—the Chamber of Commerce of the Capital of the Republic), "Federação Industrial" (Federation of Industries), "Centro de Navegação Transatlântica" (Transatlantic Navigation Center—composed of representatives of shipping companies) and the "Sindicato de Armadores Nacionais" (Syndicate of National Shipbuilders). We give below the principal characteristics of the port:

Depths of the docks and quays at low water.....	{ 800m.00 with 10m.00
	{ 1,500m.00 » 9m.40
	{ 2,390m.00 » 8m.50



Depth of the entrance channel at low tide.....	10m. 50
Width of the entrance channel.....	120m. 00
Width of evolution basin.....	250m. 00
Maximum tide variation.....	2m. 40
Number of warehouses.....	22
Area occupied by the warehouses....	164,185m <sup>2</sup> .00
Number of electric cranes of from 1 1/2 to 6 tons lifting capacity.....	96
Number of steam cranes of from 3 to 25 tons lifting capacity....	8
Swing bridges for the service of the warehouses.....	152
Floating cranes of from 25 to 90 tons lifting capacity.....	2
Locomotives.....	12
Dock railway cars.....	187

*Port of Angra dos Reis* — Situated in Ilha Grande Bay, in the City of the same name, in the State of Rio de Janeiro. It has a pier 400 meters long, 180 meters wide, with a low water depth of 8m.0, constructed on Larssen type steel piles, capped with reinforced concrete beams. The Concessionaire is the State of Rio de Janeiro Government, under the supervision of the Federal Government. We give, below, the principal characteristics of the port:

Depths of the pier at low water.....	{ 300m.00 with 8m. 00 100m.00 » 2m. 00
Depth of the entrance channel.....	8m. 00
Width of evolution basin.....	300m. 00
Maximum tide variation.....	2m. 20
Number of warehouses.....	2
Area occupied by the warehouses.....	6,077m <sup>2</sup> .66
Electric cranes of from 1 1/2 to 5 tons lifting capacity.....	4

*Port of Santos* — Situated to the North and North-East of the Island of São Vicent, in the City of Santos, State of São Paulo. It has a quay frontage of 5,021m.0, the construction being of concrete blocks on a rocky foundation. The Concessionaire is the Companhia Docas de Santos, subject to the direct supervision of the Federal Government.

The following are the characteristics of the port:

Depths of the quays at low water.....	{ 301m.00 with 10m. 00 2,449m.00 » 8m. 00 2,271m.00 » 7m. 00
Depth of the entrance channel.....	10m. 00
Minimum depth of evolution basin (Average depth: 10m.00).	8m. 50
Width of the entrance channel.....	300 to 500m. 00
Width of evolution basin.....	840m. 00
Maximum tide variation.....	2m. 34
Number of warehouses.....	59
Area occupied by the warehouses.....	281,612m <sup>2</sup> .00



Electric cranes of from $\frac{1}{2}$ ton to 30 tons lifting capacity.....	96
Steam cranes of from $1\frac{1}{2}$ to 14 tons lifting capacity.....	8
Hydraulic cranes of from 3 to 5 tons lifting capacity.....	38
Swing bridges.....	123
Floating crane with lifting capacity up to 80 tons.....	1
Locomotives.....	19
Dock railway cars.....	157

*Port of Paranaguá* — In the interior of the Bay of Paranaguá, 22 kilometers from the ocean, at the place denominated Port of Dom Pedro II, in the City of the same name, State of Paraná. It has 500 meters of quays, constructed on reinforced concrete piles. The exploitation concession is held by the State Government under the direct supervision of the Federal Government and the port has the following characteristics:

Depths of the quays at low water.....	{ 400m.00 with 8m. 00 100m.00 » 5m. 00
Depth of the entrance channel.....	8m. 00
Width of entrance channel.....	400 to 800m. 00
Width of evolution basin.....	350m. 00
Maximum tide variation.....	3m. 78
Number of warehouses.....	3
Area occupied by the warehouses.....	10,340m <sup>2</sup> .00
Electric crane with lifting capacity of 5 tons.....	1
Steam cranes with lifting capacity of from 4 to 6 tons...	3

*Port of Rio Grande* — Situated at the Eastern end of the peninsula on which is the City of the same name, on the right bank of the North channel, 18 kilometers from the ocean, in the State of Rio Grande do Sul. It has 2,355m.40 of quays, constructed of reinforced concrete blocks on a rocky foundation. The commercial exploitation of the port is entrusted to the State Government, under the direct supervision of the Federal Government. Principal characteristics:

Depths of the docks at low water.....	{ 638m.20 with 4m. 20 1,717m.20 » 8m. 50
Minimum depth of the entrance channel.....	9m. 00
Width of entrance channel.....	250m. 00
Width of evolution basin.....	250m. 00
Maximum tide variation.....	0m. 74
Number of warehouse.....	18
Area occupied by the warehouses.....	68,432m <sup>2</sup> .00
Electric cranes with a lifting capacity of from $2\frac{1}{2}$ to 5 tons...	39
Swing bridges.....	60
Coal discharging apparatus.....	1
Floaring crane with a lifting of 60 tons.....	1

*Port of Porto Alegre* — The principal fluvial port in the State of Rio Grande do Sul. Situated on the banks of the River Guaíba, in the City of Porto Alegre, 58 kilometers from the mouth of the river, in the lake denominated Lagoa

dos Patos. It has 2,614m.20 of quays, constructed of reinforced concrete blocks on a rocky foundation. The port was constructed, and is being commercially exploited by the State Government, subject, however, to the control of the Federal Government. The following are its principal characteristics:

Depths of the quays at low water.....  $\left\{ \begin{array}{ll} 1,362\text{m.}20 & \text{with } 2\text{m. } 00 \\ 463\text{m.}60 & \text{» } 4\text{m. } 00 \\ 788\text{m.}60 & \text{» } 5\text{m. } 00 \end{array} \right.$

Depth of the entrance channel..... 5m. 50  
 Width of the entrance channel..... 80 to 100m. 00  
 Width of evolution basin..... 300m. 00  
 Maximum tide variation..... 2m. 50  
 Number of warehouses..... 15  
 Area occupied by the warehouses..... 26,168m<sup>2</sup>.00  
 Electric cranes with a lifting capacity of from 1 1/2 to 5 tons.. 29  
 Swing bridges..... 15

#### MOVEMENT IN BRAZILIAN PORTS DURING THE 1919-1937 PERIOD

YEARS	OVERSEAS AND COASTWISE TRADE			
	Vessels entered		Vessels cleared	
	Number	Tons	Number	Tons
1919.....	23,126	17,594,320	23,170	17,946,010
1920.....	24,829	24,941,466	24,736	24,769,904
1921.....	22,728	23,112,156	22,767	23,193,499
1922.....	25,264	27,459,975	25,300	27,447,111
1923.....	27,083	31,681,809	27,114	31,742,206
1924.....	28,243	39,909,181	28,178	32,604,918
1925.....	28,503	33,408,718	28,556	33,492,143
1926.....	29,510	36,158,562	29,633	36,836,114
1927.....	31,154	39,839,716	30,908	39,562,829
1928.....	31,426	44,124,741	31,338	43,923,189
1929.....	34,029	47,937,017	33,985	47,748,991
1930.....	32,389	47,767,093	33,303	47,452,802
1931.....	32,632	46,019,635	32,645	45,978,867
1932.....	30,073	41,160,846	30,049	41,140,790
1933.....	30,998	46,905,828	30,938	46,860,036
1934.....	31,111	46,405,000	30,979	46,073,455
1935.....	30,900	44,979,000	30,788	44,782,000
1936.....	32,503	48,272,000	32,500	48,293,000
1937.....	34,088	50,038,732	34,063	49,949,038

# MERCHANT MARINE

The Brazilian Merchant Marine is now composed of 230 vessels, belonging to 22 different companies, which maintain 65 overseas lines, besides the coast-wise and fluvial services.

## TONNAGE AND NUMBER OF VESSELS, PER COMPANY

COMPANY	Number of vessels	TONNAGE		
		Gross	Net	Cargo carrying capacity
Companhia de Navegação Lloyd Brasileiro (Brazilian Lloyd S/S Company).....	(1) 90	227,917	138,693	267,840
Companhia Nacional de Navegação Costeira (National Coastwise Navigation Company).....	17	48,869	28,793	37,860
Sociedade Anônima Lloyd Nacional (National Lloyd S/S Company).....	21	39,007	22,858	39,880
Companhia Comércio e Navegação (Commerce and Navigation S/S Company).....	(2) 19	42,429	26,138	69,105
Companhia Carbonífera Rio Grandense (Rio Grandense Coal Company).....	11	34,235	20,576	53,680
The Amazon River Steam Navigation Company, Limited.....	22	10,484	6,606	10,116
Navegação Paraná-Santa Catarina (Paraná-Santa Catarina Inter-State Navigation Company).....	5	3,038	2,645	3,400
Rodolfo Souza & Companhia.....	2	751	438	771
Sociedade Madeireira Limitada (Madeireira Ltd.).....	1	199	96	220
Empresa Nacional de Navegação Hoepeck (Hoepeck National Navigation Company).....	3	2,210	1,043	1,730
Georg Herm Stoltz.....	1	620	324	570
Companhia de Navegação do Baixo São Francisco (Lower São Francisco Navigation Company).....	7	674	433	494
Empresa de Navegação Mineira do São Francisco (Mineira São Francisco River Navigation Company).....	8	766	550	542
Empresa de Navegação dos Autazes (Autazes Navigation Company).....	2	135	—	—
Empresa de Navegação São Luiz (São Luiz Navigation Company).....	6	127	95	112
Empresa de Navegação Clemente C. Catanhede (Clemente C. Catanhede Navigation Company).....	6	158	—	—
Companhia Viação São Paulo-Mato Grosso (São Paulo-Mato Grosso Inter-Communication Company).....	4	150	119	75
Empresa de Navegação do Alto Tapajós (Alto Tapajós Navigation Company).....	1	26	21	13
Companhia Navegação dos Rios Mamoré e Guaporé (Mamoré and Guaporé Rivers Navigation Company).....	1	8	—	—
Empresa de Navegação Fluvial do Baixo São Francisco (Lower São Francisco River Navigation Company).....	2	346	227	283
Estrada de Ferro Santa Catarina (Santa Catarina Railway).....	1	45	30	30
TOTALS.....	230	412,194	249,685	486,721

(1) — 29 passenger and 61 cargo steamers.

(2) Including 3 auxiliary vessels.



## FLUVIAL TRANSPORTATION

**T**HROUGHOUT our historical evolution, the rivers have performed a part of great importance in the system of inland communications of Brazil. Ever since the old days of the conquest of such a large geographical ambit, wherein the National sovereignty was permanently assured, there has fallen on the rivers the task of enabling man to rapidly acquire full knowledge of the interior. They soon became good and easy means of transportation and this greatly facilitated the pioneer work of the settlers, as far as the central points and the most distant regions of the country.

Possessing a very complete hydrographic system, extending in every direction, and having indeed the largest fluvial basin in the world, that of the Amazon which is twice the size of the Mississippi basin (6,500,000 km<sup>2</sup>.), Brazil could not help having in the fluvial navigation one of the most important factors of its inland intercourse. Besides this, the multiplicity of natural connections between the rivers, establishing the direct inter-communication of the different potomographic systems, encouraged us to use our watercourses to good advantage as a means of transportation, both for passengers and freight. And said fluvial network, in Brazil is an even better means of inland inter-communication, owing to the fact that, because of certain circumstances peculiar to the Brazilian geographical ambient, some of our rivers flow down to the sea and some of them run inland.

In the Amazon region, for example, where, as we have herein stressed at the proper place, there is an almost complete lack of railways, considering the great extent of the territory, the river is the most commun means of interconnection available for any purpose whatsoever. We must make it quite clear, however, that the hydrographic basin corresponding to said region, possesses, as may be verified by the table printed below, a navigable system of not less than 25,446 kms. in extent, *i. e.*, 57.89 % of the total navigable network of the country. This permits an inter-communication service as far as possible systematic and regular, of enormous benefit to the populations of certain zones still unprovided with railway and highway systems corresponding to local needs. This state of affairs is partly due to the natural conditions of the country.

In other Brazilian regions, besides the Amazon, the rivers have played an important rôle, facilitating inland pioneer work and connecting up the different settlements.

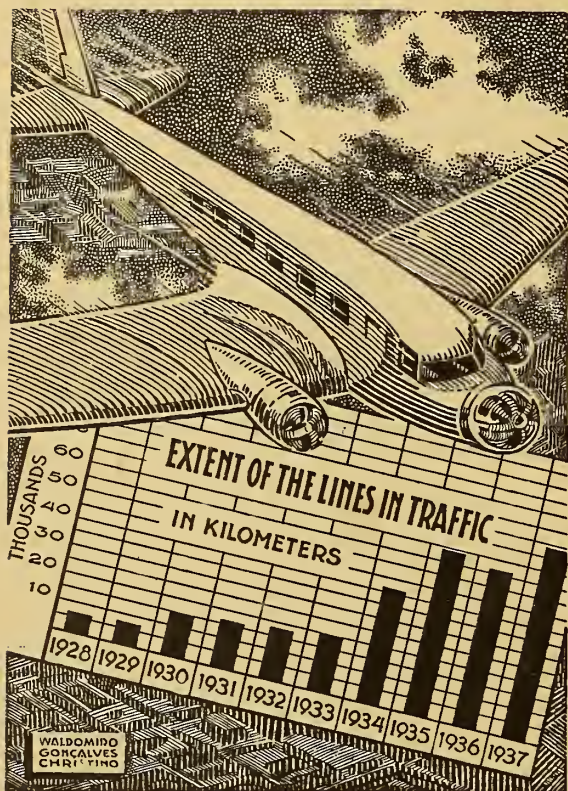
### NAVIGABLE LENGTH OF BRAZILIAN RIVERS ACCORDING TO BASINS

SPECIFICATION		Total length	
		Kms.	Percentage
Basins.....	of the Amazon.....	25,446	57.89
	of the North-East.....	4,498	10.23
	of the East.....	2,253	5.13
	of the São Francisco.....	4,135	9.41
	of the Sout-East.....	1,286	2.92
	of the Uruguay.....	625	1.42
	of the Paraná.....	3,367	7.66
	of the Paraguay.....	2,345	5.34
TOTALS.....		43,955	100.00



## CIVIL AERONAUTICS

**T**HE beginning of the commercial exploitation of aerial navigation in Brazil, dates from June 1927, when the company denominated Empresa de Viação Aérea Rio Grande was organized in the State of Rio Grande do Sul.



Up to that time Brazilian civil aviation had limited itself to a few trial flights of a sporting character, notwithstanding the many projects which appeared after the Great War for the establishing of regular air lines in Brazil.

Soon after the appearance of the VARIG (aforesaid company), which confined its activities to regional lines, other companies sprang up and the air lines commenced to multiply in Brazilian territory.

Brazil now has five National air transportation companies: — "Sindicato Condor" and "Panair do Brazil", both having their principal offices at Rio de Janeiro; "Empresa de Viação do Rio Grande", with its principal office at Porto Alegre, State of Rio Grande do Sul; "Aerolloyd Iguassú" with headquarters at Curitiba, State of Paraná; and the "Viação Aérea São

Paulo S/A", which has its head office in the Capital of the State of São Paulo.

Besides said companies, three others, foreign ones, fly over Brazilian territory, maintaining rapid and comfortable means of communication between Brazil and some of the neighbouring countries in North and South America, as well as with Africa and Europe: "Air France", "Pan American Airways, Inc." and the "Deutsche Lufthansa A. G."

The interior of the country is covered in almost every direction by the "Correio Aéreo Militar" (the efficient Brazilian Military Air Mail), which maintains regular weekly services on each one of its numerous lines.

In Brazil the guidance and control of civil and commercial aerial navigation is under the jurisdiction of the Department of Civil Aeronautics, which has its headquarters at Rio de Janeiro and is subordinate to the Ministry of Communications and Public Works. On said Government Department there also falls the duty of studying and establishing new lines, preparing the inter-

connection of same, construction, adaption and improvement of airports, and that of giving them, in accordance with the technics and requirements of aerial navigation, the equipment necessary for the efficiency and safety of air travel.

Up to 1933 the activities of the Department of Civil Aeronautics were restricted to the supervision of the services relating to civil and commercial aviation pursuant to the terms of Article I, Decree N. 19,902, of April 22, 1931.

It was only in 1934 that the Department of Civil Aeronautics amplified its range of action, also undertaking the charge of inter-connection matters, *i. e.*, construction of airports and equipment of same with nocturnal illumination, radio-lighthouses, etc.

It was thus, in said year, that construction work was started on the huge "Santos Dumont" and "Bartholomeu de Gusmão" airports, in the Federal District, the second named one being intended for dirigibles.

The "Santos Dumont" aerial terminus, which, in the opinion of the experts who have visited same, will be one of the largest and most beautiful establishments of its kind in the world, is situated in 43°10'09" W and 22°54'42" S.

It will be equipped with the most modern apparatus in the world, from the technical and artistic points of view and will have adequate installations for both day and night traffic. It will have runways in all directions, with extensions varying from 800 to 1,200 metres, and will, moreover, have a perfect electric lighting, signalling and lighthouse system allowing any type of aircraft to start off and land in safety at any time of the day or night, whatever the state of the weather may be.

The aerial terminus for dirigibles "Bartholomeu de Gusmão", already opened to traffic, with all its installations in order, is situated in 43°43' W and 22°56' S. at Santa Cruz, a suburb of Rio de Janeiro, to which the City is connected by railways and highways.

It has an hangar measuring 270 ms. X 50 ms. built of special steel on concrete stakes. The station is roofed with "Eternit", a composition of amianth and cement which possesses the triple advantages of being absolutely impermeable, incombustible and light.

Said terminus also has two storage tanks where hydrogen is kept under high pressure, a Propan gas deposit, engine house, gasometer having a capacity of 500 m<sup>3</sup>. and a section with compressing apparatus and electrolizing filter for the manufacture of hydrogen and oxygen, said filter being the largest one of its kind in the world.

Besides this the "Bartholomeu de Gusmão" airport has accommodation for the crews of the dirigibles, a station for passengers to debark or embark, as the case may be, restaurant, Custom House, Public Health and Police Divisions, in short, all the comfort of a modern airport.

At the side of the hangar, which is constructed following the direction of prevailing winds, a field has been laid out with every proper requisite for the landing and starting off of the airships.

The Department of Civil Aeronautics is now actively engaged in the execution of a vast plan of aerial communications, drawn up in 1937 and which will be amplified even while it is being carried out.

Said plan consists of the due preparation of the airports at Belém (Pará), Fortaleza, Recife (Pernambuco), Salvador (Baía), Belo Horizonte, Curitiba, Porto Alegre and Goiânia, as well as the construction and improvement of the landing fields pertaining to the different air routes and circuits already existing in the country.



Aforesaid Department has outlined and is now completing the respective studies so as to carry out its magnificent programme within the term of five years.

There is included in above mentioned plan the establishing of new air routes, as well as the dissemination of properly equipped air ports and landing fields in all the States of Brazil, pursuant to a systematic and rational criterion.

The Department of Civil Aeronautics maintains ten Regional Offices throughout the country, entrusted with the studies to be made and the work to be done in their respective zones of jurisdiction, there falling on each central administration the duty of supervising the execution of ordinary and special work, whether same be on a large, or a small scale.

At all the ports of call of the sea planes belonging to commercial lines which operate along the Brazilian coast, there are reserved water superficies for said aerial clippers to ride at anchor, while at all the principal ports there are landing stages, floating piers and other installations adequate for the embarkation and debarkation of passengers and for the aircraft to take on supplies.

In Brazil the *airports* are intended for public traffic and are open to any air vessels whatsoever, with no restrictions as to ownership or nationality, on the payment of the customary utilization charges.

Flying fields and the installations constructed on same for the private use of aerial transportation companies, airplane factories, pilot schools and flying clubs, are considered to be *aerodromes* and cannot be used for embarking and debarking passengers, loading and unloading air mail and merchandise or other public transportation operations.

Mercantile air vessels, as well as those engaged in tourist traffic or used for sport, are obliged, on arriving from, or when bound for, Foreign countries, to respectively land at, and start off from, one of the Custom House airports. Moreover, they must not fly at a height of more than 1,000 meters in order to reach such airports and have to follow the frontier routes stipulated in Decree N. 24,572, of July 4, 1934.

Air vessels cannot fly over the interdicted zones fixed in aforesaid decree, being also forbidden to take photographs or make cinema films of same.

Thus it is not permitted to transport, or use, in said air vessels (*i. e.* dirigibles, airplanes and seaplanes) photographic or cinematographic apparatus, without due permission of the Ministry of Communications and Public Works.

The Brazilian Government has never granted a privilege of any kind whatsoever to aerial navigation companies and Brazilian aeronautical legislation forbids the granting of this kind of concessions.

With the exception of the subsidies per kilometer flown, that the Government has guaranteed for the execution of certain and determined lines, and the little pecuniary aid grants of some of the States to companies which exploit aerial traffic in their territories, said companies, whether National or Foreign, receive no other subsidy whatsoever from the public coffers.

The Brazilian Post Office entrusts them, indiscriminately and without privilege, with the conveyance of duly stamped air mail matter, and remunerates them for the rendering of said service, on the basis of the gross weight of said mail matter carried, pursuant to the weight units fixed in the respective postal tariff, so that each company receives a part of the tax collected from the public by means of stamps, in payment for the mail matter that it conveys in its air or sea planes, as the case may be, the Post Office only retaining a part

of the product of aforesaid tax, equivalent to little more than the ordinary postal rate to which above mentioned correspondence would be subject if it did not have to be sent by air mail.

Brazil has not yet adhered to the International Convention of Aerial Navigation (1919), nor ratified the Ibero-American Conventions of Madrid (1926) and Pan American of Havana (1928). Neither has Brazil, as yet, ratified the Conventions which it entered into with Argentina and Uruguay. Under these conditions Foreign airplanes engaged in tourist traffic or used for sport can only enter the country and fly over National territory by means of permits previously obtained from the Ministry of Communications and Public Works.

The regular air lines, both National and Foreign, depend upon authorization of the Brazilian Government in order to be established and exploited, there being reserved for Brazilian aircraft the conveyance of passengers and merchandise between points on National territory.

#### COMMERCIAL AIR TRAFFIC DURING THE 1928-1937 PERIOD

YEARS	Number of com- panies	TRAFFIC CONDITIONS AND MOVEMENT									
		Extent of lines in traffic in kilo- meters	Aircraft in transit	Aviators in service (1)	Flights		Transportation				
					Number of flights	Distance flown in kilometers	Hours flown	Passen- gers carried	Baggage (kilos)	Mail mat- ter (gross weight) (kilos) (2)	Freight (kilos)
1928.....	4	6,595	57	24	1,178	912,359	6,615	2,504	20,259	9,688	1,911
1929.....	4	7,245	51	23	1,476	1,140,130	8,212	3,651	29,617	24,051	7,778
1930.....	4	15,503	62	39	1,767	1,707,977	12,977	4,667	23,864	31,946	9,600
1931.....	4	16,374	66	27	1,746	1,854,696	12,097	5,102	46,618	47,908	21,916
1932.....	4	18,355	55	34	1,683	2,200,446	14,167	8,894	101,884	68,207	129,874
1933.....	5	20,066	54	115	2,599	2,444,853	15,241	12,750	145,074	75,057	112,755
1934.....	7	41,040	61	150	3,287	3,380,433	20,075	18,029	213,039	73,542	142,636
1935.....	7	59,246	59	179	3,374	3,720,240	21,080	25,592	325,102	79,652	161,720
1936.....	7	56,384	60	231	3,432	4,689,023	24,441	35,190	478,057	118,652	153,013
1937.....	7	68,472	66	301	6,076	6,112,658	30,096	61,874	795,998	149,138	235,024

(1) Pilots only were included up to 1932.

(2) The decrease in weight of the mails in 1934, in relation to those of 1933, was owing to the Brazilian postal administration having from June of that year, adopted lighter bags for the transportation of air mail matter; this very cause affecting the weight of the 1935 air mail.

#### MILITARY AIR MAIL

THE Flying Force of the Brazilian Army, conscious of the great mission which it has to fulfil, above all as a pacific approximation link, is establishing, since 1931, an inter-connection system between the different points of National territory, by means of airplanes with military pilot crews.

Said system has now a total extent of 13,878 Kms., with a weekly run of 42,000 Kms.

Having started the postal service in said year, with the inauguration of the Rio-Goiaz route, 1,493 Kms. in extent, the Military Air Mail now maintains fourteen routes in traffic, from Santo Antonio do Oyapock, in the extreme North of the country, to Quarai, on the Brazilian — Uruguayan frontier.



The "Go West" idea encountered in the M. A. M. the greatest champion of its practical realization. This is proved by the existence of the Goiaz, Mato Grosso, Foz do Iguassú and Guaíra lines, as well as by others already projected for the purpose of extending the routes to Corumbá, Rio Branco and Tabatinga. And, together with this development, along parallel lines, which represent the advance of Brazilian civilization towards regions having no easy means of communication with the coast, the North to South inter-connection route is already a splendid reality.

Starting from Santo Antonio do Oyapock, on the Brazilian-French Guiana frontier, said route attains Belém (Pará), then passing through Teresina, Fortaleza, Belo Horizonte, Rio, São Paulo, Curitiba, and Porto Alegre, until it finally reaches Quaraí.

Using ninety five normal landing fields and thirty three radio stations, the Military Air Mail covered, during 1937, one million, three hundred and sixteen thousand, three hundred and forty kilometers, transporting a total of forty five tons of correspondence.

With the object of amplifying the present military air mail system, there is being prepared the inter-connecting up of the Tocantins route, which will permit rapid communication between Rio and Belém (Pará), besides serving one of the richest zones of the interior of the country and which is now struggling against a complete lack of the means of transportation.

Aforesaid route will, in the future, be the trunk line for the whole system in its unceasing march to the West.

#### TRAFFIC CONDITIONS AND MOVEMENT IN 1937

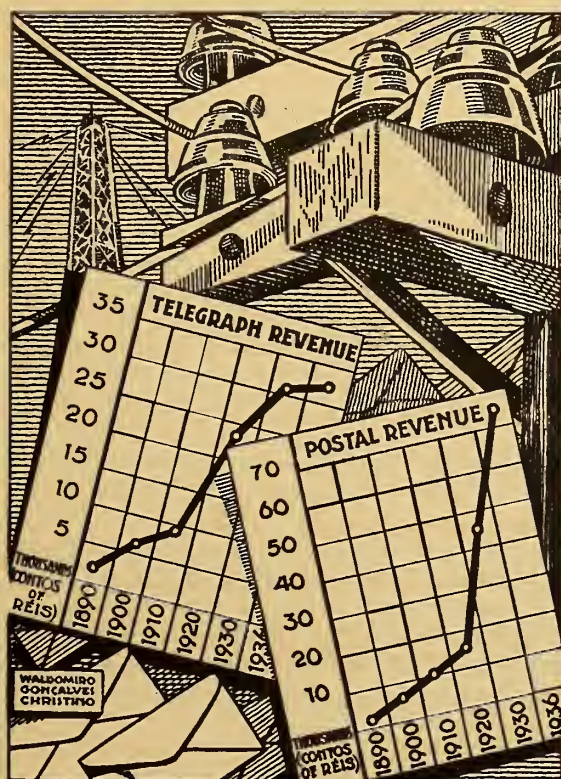
ROUTES	Extent of the line (Kms.)	Normal landing fields	Radio Stations	Number of flights completed	Flying time in hours	Kilometers run	Number of landings	Pilots employed	Passengers carried	Mail matter transported (grms)	Punctuality percentage
Ceará.....	2,450	15	8	52	1,478.39	250,555	1,255	24	65	8,833,120	95
Teresina.....	875	9	1	53	560.05	84,050	696	9	51	6,479,535	92
Belém (Pará)....	900	7	3	53	622.33	97,505	618	8	72	3,536,643	98.5
Goiás.....	1,493	10	4	52	817.29	134,895	829	24	48	1,462,812	94
Paraguay .....	1,980	8	5	52	1,164.34	200,982	830	23	133	5,478,207	95
Paraná.....	917	7	2	51	556.25	91,943	439	10	106	3,708,091	95
Guaíra.....	760	7	3	51	547.15	80,968	474	11	106	4,422,841	90
Rio Grande do Sul.....	905	4	2	52	615.20	101,671	433	14	118	1,422,504	88
Interior of the State of Rio Grande do Sul	923	10	2	49	389.13	57,196	537	10	62	1,595,312	96
South Frontier of the State of Mato Grosso	980	5	1	47	202.20	32,448	190	2	65	448,689	99.5
Coast.....	650	3	2	149	1,095.23	162,567	740	36	163	7,364,012	96
Santo Antonio do Oyapock.....	840	8	—	13	111.35	16,640	69	6	19	130,300	100
Mossoró.....	205	2	—	12	32.20	4,920	24	4	8	18,200	100
TOTALS.....	13,878	95	33	686	8,191.11	1,316,340	7,144	—	1,016	44,900,266	95

## POSTAL AND TELEGRAPH SERVICES

THE merging of the old Post and Telegraph Departments, pursuant to the provisions of Decree N. 20,859, of December 26, 1931 greatly improved the dual services of those important sectors of the public administration to the benefit of all concerned.

At the present time, the Department of Posts and Telegraphs consists of 29 Regional Directorates and 4,722 Agencies (*i. e.* combined Post and Telegraph Offices), besides a Delegacy at Porto Velho, said Departments being subordinate to a General Directorate, which acts as a superior organ of direction and supervision.

The net revenue collected, in 1937, by the Post and Telegraph Offices, attained the sum total of 129,780:050\$500, being much higher than that of 1936, which was 108,781:832\$600, and also than that of 1935, which reached the amount of réis 87,865:980\$000. It is here necessary to stress the fact that in above mentioned revenue there is not computed the cost of official correspondence, which, in 1937, reached the amount



of 6,615:367\$800; in 1936: 6,251:096\$800 and in 1935: 5,750:305\$200.

The air mail traffic development, verified in 1937, is very significant of the march of events. This important service is carried out by the following companies: Air France, Sindicato Condor, Panair do Brasil, S. A., Viação Aérea São Paulo, Viação Aérea Riograndense, Aeroloid Iguassú and by the airplanes and seaplanes of the Army and Navy air mail services.

During 1937, there was concluded the construction of 15 special buildings, in the Capital of Brazil and in various States of the Union, said work having been executed under the administration régime, by engineers of the Departments of Posts and Telegraphs. The total cost of the construction work was 4,287:554\$300, said Department having, on the conclusion of such new buildings, a total of 126, all built since 1932, the value of same being appraised at 22,285:063\$378.

Also during the course of 1937, 91 Post Offices were inaugurated, 19 reopened and 5 suppressed. As regards mail routes, 148 were created, with a total



extent of 4,179 kilometers, the routes served by the motor service of the Department being augmented by 2,028 kilometers.

In December 1937 the Department had a total of 28,296 functionaries in active service, including those working on a daily wage basis and those engaged by contract.

The gross postal revenue received attained the sum of 85,046:697\$800, after there having been discounted the amounts relating to the payment of the air mail traffic.

There were paid, during the course of the year, 1,528 international postal orders, equivalent to 322:587\$200, as against 1,731, in the value of 355:026\$200, in 1936.

For the successful execution of the telegraphic service, which, in 1937 was much more satisfactory than in the previous year, the new interior wireless telegraph stations contributed to an extraordinary extent, their automatic service constituting a precious aid, permitting the alleviation of the other lines at times of heavy service, principally in the direct connecting up of the most important centers of the country.

At the end of 1937, the extent of the Department's telegraph lines was 61,434,699 meters, the increase in the system attaining 119,973,431 meters.

The total number of stations, in December 1937, was 1,556, of which 1,171 were telegraph and 385 telephones stations. The number of telephone posts for line inspection work, of which in 1936 there were 114, in 1937 was increased to 118.

Up to December 1937 there were 1,383 telegraph apparatus in service, distributed as follows, according to the types: — Morse — 1,274; Bandot — 64; Teletipo — 27; Creed — 18.

With the inauguration of the automatic wireless stations at Belém (Pará), Recife (Pernambuco) and Porto Alegre, the auxiliar wireless system proposed since 1932, is almost completed, there only having to be concluded the mounting of a station at Fortaleza, to ultimate the first part of the plan approved.

There were installed and opened to traffic, by the aerial navigation companies, 14 new transmitting stations, at different points along the coast of Pará.

#### DEVELOPMENT OF THE POSTAL SERVICE DURING THE 1890-1936 PERIOD

YEARS	Mail forwarded and received	Revenue (milréis)
1890.....	50,441,018	2,569,019
1895.....	74,547,981	4,137,820
1900.....	278,480,353	6,595,802
1905.....	394,045,058	7,595,255
1910.....	543,669,157	10,150,000
1915.....	443,062,587	12,680,000
1920.....	642,376,265	15,044,000
1925.....	1,746,162,281	31,173,208
1926.....	1,860,812,953	33,246,563
1927.....	1,911,628,733	35,678,965
1928.....	2,109,590,565	54,167,289
1929.....	2,198,073,682	58,217,850
1930.....	1,914,684,154	46,187,982
1931.....	1,506,259,594	37,969,197
1932.....	1,195,937,574	37,455,542
1933.....	1,430,697,195	41,360,808
1934.....	1,504,860,300	52,908,192
1935.....	1,982,765,361	58,607,012
1936.....	1,971,599,570	76,466,487

## DEVELOPMENT OF THE TELEGRAPH SERVICE DURING THE 1890-1936 PERIOD

YEARS	Length of lines (meters)	Words transmitted	Revenue (milréis)
1890.....	11,895,962	10,544,558	2,042,745
1895.....	18,174,609	23,137,947	3,915,745
1900.....	21,266,243	20,137,201	6,819,307
1905.....	26,129,117	25,111,946	7,166,696
1910.....	31,332,391	51,382,768	9,533,478
1915.....	37,097,548	68,423,896	14,378,547
1920.....	44,447,580	127,823,890	22,951,151
1925.....	51,093,994	150,375,992	32,174,968
1926.....	51,375,129	121,118,747	30,596,000
1927.....	52,698,942	138,048,649	33,092,000
1928.....	55,859,907	92,622,168	33,215,000
1929.....	57,566,801	96,344,746	32,787,000
1930.....	58,947,993	89,081,330	30,969,000
1931.....	59,248,320	118,520,066	30,797,289
1932.....	59,281,100	151,228,318	31,694,031
1933.....	59,681,726	159,560,161	33,074,686
1934.....	59,743,244	176,461,486	33,570,570
1935.....	60,485,585	164,754,167	29,258,968
1936.....	59,044,156	192,728,779	32,315,346

## POSTAL TRAFFIC

## Mail matter received, sent out and in transit

YEARS	Number of mail bags	MAIL MATTER-NOT REGISTERED AS VALUABLE			MAIL MATTER WITH VALUE DECLARED					
		Ordinary	Registered	Special deli- very	Letters and official communications		Parcel post		Sum total (in milréis)	
					Number	Amount (in milréis)	Number	Amount (in milréis)		
RECEIVED										
1936...	7,252,881	1,013,057,531	50,003,724	3,942,888	2,519,367	698,737,295	549,822	79,220,603	777,957,898	
1937...	6,441,216	994,110,935	50,689,946	5,343,490	2,345,212	729,544,000	551,946	70,356,877	799,900,87	
SENT OUT										
1936...	7,499,497	951,591,013	43,080,341	3,111,952	1,978,276	773,024,918	413,783	67,200,625	840,225,543	
1937...	6,304,440	919,928,069	42,826,829	5,128,959	1,744,964	675,500,982	374,691	63,721,656	739,222,638	
IN TRANSIT										
1936...	3,827,424	476,729,329	127,37,287	1,173,992	657,454	135,098,958	17,4900	19,083,457	154,182,415	
1937...	3,000,906	395,072,968	146,84,481	1,351,872	783,968	214,744,608	17,8047	13,723,761	228,468,369	



# **TELEGRAPHIC TRAFFIC** **Telegrams and radio-telegrams transmitted in 1937**

SPECIFICATION	TRAFFIC	
	Telegrams	Words
<b>NATIONAL SERVICE</b>		
Private and ordinary.....	6,593,044	101,580,726
Private and urgent.....	296,374	4,688,198
State.....	179,838	5,775,284
Press.....	76,418	9,071,216
City.....	996,592	17,441,338
Congressional.....	64,664	2,337,440
C.T.N. Letters.....	441,414	11,325,344
Official paid for.....	42,670	1,447,620
Official, not collected.....	879,254	75,509,950
<b>INTERNATIONAL SERVICE</b>		
Private and ordinary.....	3,896	43,906
Private pretermitted.....	7,668	79,056
Press.....	1,828	20,388
N.L.T. Letters.....	12,070	168,156
Official paid for.....	2,432	38,130
Official, not collected.....	4,098	145,508
<b>RADIO-TELEGRAPHIC SERVICE</b>		
National vessels.....	2,120	31,360
Foreign vessels.....	2,494	32,024
Official paid for.....	68	1,370
Official, not collected.....	1,210	18,170
<b>TOTALS.....</b>	<b>9,608,152</b>	<b>229,755,184</b>

Note.— Besides the traffic belonging to the Department of Posts and Telegraphs, registered in this table, there is also the exclusive work of railways and telegraph companies.

# *INTERNAL TRADE*



## INTRODUCTORY

**I**N an analysis dealing with the fundamental aspects of the Brazilian trade in the course of the last few years, two characteristics stand out with a particularly special significance: a) parallel to the mechanized manufacture expansion we find the purchasing power of the home markets increased, the trade interchange being also intensified; b) new lines for the production policy by means of a rational fostering of other cultivations having been traced, we began to react against the influence exercised by a limited number of products over the Brazilian exportation, prospects becoming brighter for our overseas trade expansion.

However, the ever-increasing broadening of the home markets gave Brazil the most ponderable elements whereby to get over the reflexes thrown by the world's crisis on her economical structure between 1929 and 1932.

While the milréis was getting depreciated in relation to international currency, its purchasing power, on the other hand, kept the same steady stability within the country, thus permitting Brazilian economy to adapt itself to the conjuncture of depression. And the internal trade pursuits assured a consuming market to the national production, smoothing out the effects and repercussions of our intercourse with the outside world, moreover establishing an economic environment adequate to the reconstruction movement started in 1933.

The contrast between foreign and domestic trades being so marked, it was up to the latter to neutralize, with its vitality and continuous increment, the uncertainties and instabilities of the first, still subjected to all kinds of fluctuations.

An expressive example of such an expansion of the interstate exchange is given by the State of São Paulo (thanks chiefly to the industrialization undergone by its economy) in the relations with all the other political units of the country. In 1907, the value of São Paulo's exports to the rest of Brazil hardly reached 20,000 contos de réis. In 1927, their figures went up to 400,000 contos, and ten years later they reached 662,000 contos, while at the same time the State's purchases in the other federated units were having an almost parallel ascent by coming up to 545,000 contos. Rio Grande do Sul, whose economical conditions are characterized by stability, has in turn the best markets for its exports in other States of Brazil. Of such exports, in 1937, only about 25 % went to foreign markets.

Various circumstances, justified in a country which shows natural features such as Brazil, have not as yet permitted the full achievement of the campaign which the "Instituto Brasileiro de Geografia e Estatística" is determinately



carrying on in order to present, with absolute accuracy, statistics referring to all domestic trade. Meanwhile, the data brought out correspond merely to the coastwise interchange which, in spite of being very significant in its results, does not accurately express how far is the régime of commercial exchange intensified among the Brazilian States, incidental both to the increase of the national consuming power and the progress recorded in our industrial organization.

### COASTWISE TRADE

General movement during the 1936-1937 period

COMMODITIES	1936		1937	
	QUANTITY (tons)	VALUE (contos of réis)	QUANTITY (tons)	VALUE (contos of réis)
Class I — Live Animals.....	737	2,216	722	1,770
Class II — Raw Materials				
1 — Alcohol.....	10,630	11,918	8,193	11,584
2 — Cotton: Sewing thread.....	1,167	34,138	1,282	35,845
3 — Other threads.....	1,138	10,359	1,181	10,152
4 — Raw cotton.....	40,754	173,433	41,312	174,283
5 — Aniline.....	436	8,459	509	11,314
6 — Rubber.....	6,874	27,660	7,684	35,307
7 — Coal.....	162,734	9,478	160,339	10,288
8 — Cement.....	28,806	8,160	56,863	15,611
9 — Babassú nuts.....	7,174	8,962	6,173	9,924
10 — Iron bars.....	11,645	14,537	13,266	19,791
11 — Leaf tobacco.....	16,782	51,275	16,391	53,711
12 — Wool in bulk.....	2,268	13,334	3,121	25,137
13 — Timber.....	187,999	62,235	195,374	57,281
14 — Skin and hides.....	9,680	76,657	9,633	89,955
15 — Tallow.....	5,022	7,257	4,288	6,235
Sundry items.....	109,664	140,158	120,822	151,778
TOTAL OF CLASS II.....	692,773	648,020	646,381	718,196
Class III — Manufactured articles				
16 — Cotton: Bed clothes.....	1,738	16,172	1,694	14,362
17 — Hosiery.....	311	7,963	294	7,737
18 — Bags.....	2,608	19,219	2,391	16,765
19 — Textile fabrics.....	39,924	673,804	41,101	591,996
20 — Other articles.....	3,881	65,750	4,314	61,325
21 — Automobile accessories.....	1,266	13,814	1,592	17,166
22 — Haberdashery.....	1,584	37,074	1,784	40,426
23 — Office equipment.....	1,538	8,748	1,199	7,573
24 — Automobiles.....	6,150	51,422	6,659	66,311
25 — Leather footwear.....	2,286	39,832	1,904	39,228
26 — Inner tubes.....	1,337	26,828	1,378	25,755
27 — Felt hats.....	489	13,319	496	14,253
28 — Hats, unspecified.....	279	7,484	209	5,722
29 — Cigars.....	1,724	22,599	1,651	23,932
30 — Cigarettes.....	2,197	26,917	2,363	29,367
31 — Locks, padlocks, etc.....	2,537	14,829	2,352	15,683
32 — Copper wiring.....	1,493	10,153	1,772	15,127
33 — Gasoline.....	41,374	64,700	43,695	68,007
34 — Kerosene.....	9,945	11,658	12,715	14,723
35 — Electrical machinery.....	1,980	26,897	2,150	30,179
36 — Chinaware.....	6,360	14,010	4,944	13,196
37 — Wooden furniture.....	3,852	11,651	4,810	14,874
38 — Wrapping paper.....	9,400	16,972	11,284	20,377
39 — Printing paper.....	4,665	10,701	5,345	12,716
40 — Paper, use unspecified.....	6,783	16,209	4,166	9,591
41 — Perfumery.....	1,794	26,795	2,010	31,882

## COASTWISE TRADE

General movement during the 1936-1937 period

COMMODITIES	1936		1937	
	QUANTITY (tons)	VALUE (contos of réis)	QUANTITY (tons)	VALUE (contos of réis)
42 — Matches.....	3,347	37,570	3,478	38,968
43 — Chemical products.....	23,459	134,811	26,530	153,902
44 — Radios and accessories.....	318	14,024	407	20,306
45 — Jute bags.....	5,439	30,177	5,254	28,395
46 — Woollen textiles.....	952	32,681	900	33,645
47 — Silken textiles.....	562	30,678	581	33,107
48 — Iron drums.....	16,745	31,564	17,151	32,528
Sundry items.....	166,924	475,089	191,711	557,779
TOTAL OF CLASS III.....	373,241	1,932,114	410,284	2,106,383
Class IV — General foodstuffs				
49 — Rice.....	134,121	126,823	144,770	164,556
50 — Sugar.....	309,035	251,140	247,498	251,804
51 — Lard.....	36,638	105,082	38,126	119,789
52 — Potatoes.....	31,004	20,974	25,193	16,286
53 — Beverages: Beer.....	28,177	29,629	35,896	37,971
54 — Ordinary wine.....	40,868	43,105	43,664	45,974
55 — Coffee.....	31,126	41,190	28,655	48,540
56 — Onions.....	26,096	26,047	29,429	27,190
57 — Preserved meat.....	7,280	15,297	4,099	8,550
58 — Manioc flour.....	58,771	21,712	87,765	45,339
59 — Wheat flour.....	98,517	107,670	111,140	139,508
60 — Beans.....	50,727	35,696	51,224	41,405
61 — Dessert fruits.....	9,228	5,977	8,534	5,949
62 — Table products.....	10,977	9,400	10,245	14,704
63 — Butter.....	4,739	23,804	5,309	33,119
64 — Maize.....	5,190	1,755	17,673	8,050
65 — Common salt.....	339,974	38,771	381,315	44,464
66 — Jerked beef (Xarque).....	80,321	151,265	80,208	180,525
Sundry items.....	95,762	156,764	114,554	194,289
TOTAL OF CLASS IV.....	1,398,571	1,212,101	1,465,897	1,428,312
GRAND TOTAL.....	2,365,322	3,794,450	2,523,284	4,255,161

## SUMMARY OF COASTAL TRADE DURING THE 1928-1937 PERIOD

(Average: 1928-1929 = 100)

a) — Quantity

YEARS	QUANTITY (gross weight)					
	TOTAL		NATIONAL MERCHANDISE		NATIONALIZED MERCHANDISE	
	Tons	Index numbers	Tons	Index numbers	Tons	Index numbers
1928.....	1,900,852	99	1,767,751	99	133,101	102
1929.....	1,921,352	101	1,792,879	101	128,475	98
1930.....	1,560,032	82	1,453,410	82	106,622	81
1931.....	1,632,840	85	1,536,347	80	96,493	74
1932.....	1,727,541	90	1,609,780	96	117,761	90
1933.....	1,865,641	98	1,740,666	98	124,975	95
1934.....	2,087,376	109	1,959,752	110	127,624	97
1935.....	2,179,652	114	2,047,375	115	132,277	101
1936.....	2,365,322	124	2,227,569	125	137,753	103
1937.....	2,523,284	132	2,382,133	134	141,151	106

## SUMMARY OF COASTAL TRADE DURING THE 1928-1937 PERIOD

(Average: 1928-1929=100)

b) — Value

YEARS	VALUE					
	TOTAL		NATIONAL MERCHANDISE		NATIONALIZED MERCHANDISE	
	Contos of réis	Index numbers	Contos of réis	Index numbers	Contos of réis	Index numbers
1928.....	3,026,398	104	2,677,148	104	349,250	104
1929.....	2,787,880	96	2,465,262	96	322,618	96
1930.....	2,058,446	71	1,779,195	69	279,251	83
1931.....	2,234,409	77	1,953,118	76	281,291	84
1932.....	2,346,731	81	2,074,774	81	271,957	81
1933.....	2,551,114	88	2,230,784	87	320,330	95
1934.....	2,782,036	96	2,457,131	95	324,905	97
1935.....	3,297,531	113	2,917,438	113	380,093	113
1936.....	3,794,450	125	3,373,640	126	420,810	120
1937.....	4,255,161	140	3,794,790	141	460,371	131

## IMPORTS AND EXPORTS BY FEDERATED UNITS IN 1937

ORIGIN AND DESTINATION	IMPORTS		EXPORTS	
	Quantity (tons)	Value (contos of réis)	Quantity (tons)	Value (contos of réis)
Territory of Acre.....	5,300	16,896	9,625	28,636
Amazonas.....	42,979	107,009	14,323	35,640
Pará.....	74,820	183,003	65,249	91,379
Maranhão.....	26,126	68,575	25,187	48,890
Piauí.....	16,382	57,103	5,911	3,540
Ceará.....	92,416	253,295	63,501	66,135
Rio Grande do Norte.....	51,344	94,158	298,986	83,899
Paraíba.....	46,764	92,888	40,690	113,776
Pernambuco.....	177,839	402,351	195,700	386,314
Alagoas.....	37,699	81,059	87,942	129,829
Sergipe.....	25,496	65,408	50,920	56,219
Baía.....	168,638	467,748	104,712	168,886
Espírito Santo.....	39,687	85,931	44,638	33,513
Rio de Janeiro.....	23,541	19,970	65,410	25,866
Federal District.....	780,988	839,692	403,377	1,303,852
São Paulo.....	478,003	547,016	171,952	664,636
Paraná.....	60,861	96,090	94,601	71,509
Santa Catarina.....	62,351	148,312	250,320	152,565
Rio Grande do Sul.....	305,204	624,986	530,119	789,867
Mato Grosso.....	6,846	3,671	121	210
TOTALS.....	2,523,284	4,255,161	2,523,284	4,255,161

# *EXTERNAL TRADE*





## INTRODUCTORY

**D**URING the last years great and constant has been the heed of the Government to the objective of developing our external trade, always endeavouring to capture new markets for our products and to expand the possibility of consumption of those already linked to our commercial activities.

In this way much has been done, since the present Government took the reins of office in its hands, in order to improve the structure of our economic relations with other countries, by means of deeds and conventions signed with the end in view to increasing Brazilian trade with other nations.

From 1930 up to this writing several temporary economic agreements and definite pacts have been entered into with many countries, all within the spirit of equality of treatment and reciprocity of concessions, always taking into consideration the conditions peculiar to each country and the nature of its products.

Thanks to these measures the volume of our exportation has increased progressively, as may be seen from the tables submitted hereafter. These are very expressive and show the auspicious and ascending trend of our export figures.

Nevertheless, the Government deemed that it could no longer postpone the organization of a service with the chief aim of coordinating the activities of Brazilian production, so as to intensify and develop the commercial relations of the country, having in view, primarily, our export movement.

In this way the Federal Council of Foreign Trade was created in 1934, by means of a decree, and this organ became directly subordinated to the President of the Republic, its Chairman.

This Council is composed of 16 members, 3 of which represent the class organizations of Agriculture, Industry and Commerce, indicated by these classes but appointed by the President of the Republic. The remaining members are appointed by the President, independent of indications, and are chosen from persons notoriously competent in these matters.

The Council consists of 3 Chambers and a Board of Co-ordination. The former are entrusted with the task of reporting upon the problems submitted to their appreciation, before they are taken to the plenary. The latter is composed of the directors of the Chambers and of the Secretariat of the Council.

Whenever it is considered convenient, delegates of associations, syndicates and other institutions, as well as any public employee or party that is a specialist in economic questions, may be asked to participate of the meetings of the Chamber, without, however, the right to vote.

The Secretariat of the Council embodies 3 sections, namely: the administrative, the economic research and the promoter of foreign trade, the last being in charge of the commercial museum.

Many and varied are the activities bestowed upon the Council, which functions as an informative organ of the Federal Government. However, its principal task is to develop the commercial relations between Brazil and other countries. It behoves the Council to: — a) Pronounce its opinion upon questions, both domestic and foreign, affecting the economic and commercial interests of the country; b) to submit measures in the national and international fields, that it may consider capable of contributing to the better development of our exports and of increasing the production easiest to export; c) to gather, by means of enquiries and investigations among the federal, state and municipal offices, as well as class associations and private organizations, all the data and elements deemed useful to a better knowledge of the various problems connected with the economic welfare of the nation; d) to bring all the associations, institutions, concerns and industrial and commercial firms of Brazil into contact with foreign ones, supplying them with information and guidance so as to establish direct mercantile intercourse; e) to organize and maintain the Commercial Museum of Brazil and to prepare plans for the participation of the Union and States in foreign fairs and exhibitions, as well as to arrange for international propaganda of Brazilian products; f) to promote the publication of a Bulletin of Economic Information and of the Brazilian Economic Year-Book.

Besides the above duties, it is still incumbent upon the Council to propose to the Head of the Government the negotiation or denouncement of contracts, agreements and treaties affecting commerce or navigation, once these affect directly the interests of commerce, agriculture or of the extractive, cattle and manufacturing industries; to regulate imports and exports and, finally, to supply State Governments with enlightenment, suggestions and studies about the economic measures within their scope, which they may have to furnish when requested or when public needs so demand.

Such are the tasks, in their general lines, which were entrusted to the Federal Council of Foreign Trade, whose work on behalf of the expansion of our international trade is truly worthy of note. But still more may be expected from its diligence and activity, devoted as are its organs to the problems which affect them.

Since the date of the creation of the Council the volume of our exports abroad has increased constantly, as may be verified from the following figures: — Exports in 1934 — 2,184,782 tons; 1935 — 2,761,517; 1936 — 3,108,727; 1937 — 3,296,345; in 1938 they exceed all previous years and reached 3,933,870 tons, the highest figures ever attained by our exports abroad at any time.

By comparing 1934 figures with those for 1938, the latter exceeds them by 1,749,088 tons, which represent quite an appreciable increase.

It should also be stressed that in the total of our 1938 figures are computed 973,905 tons of raw material, 771,517 tons of foodstuffs, whereas only 12,014 tons of manufactured goods were included in the exports of the year.

This is a point that deserves the attention of the competent parties, since in view of the small cost of labour in Brazil and our vast resources in raw material, it would be only natural that our industries should have more possibilities of increasing considerably the demand for its manufactured goods in the foreign markets.

**GENERAL MOVEMENT OF IMPORTATION**  
**Quantity and value, according to origin, in 1937**

ORIGIN	Quantity (kilos)	VALUE	
		In milrêis	Equivalent In pounds sterling
Africa			
Anglo Egyptian Sudan.....	99,039	431,952	3,273
Algolia.....	131,258	309,827	2,514
Egypt.....	7,861	30,175	228
Kenya.....	5,890,527	2,719,431	20,891
Madagascar.....	11,401	68,158	518
Madeira.....	52,997	474,782	3,619
Morocco.....	52,716	132,156	982
Tanganyika.....	471,408	1,094,162	8,502
Tunis.....	3,986	26,142	197
Union of South Africa.....	791,765	2,875,328	21,566
Zanzibar.....	26,487	157,580	1,178
Asia			
British India.....	26,519,422	53,956,965	412,967
Ceylon.....	22,655	53,762	409
China.....	806,273	1,919,551	14,704
Cyprus.....	25,812	62,259	469
Hong Kong.....	22,323	43,869	311
Iraq.....	2,859	5,604	39
Japan.....	21,081,159	85,625,659	647,472
Java.....	784,243	1,891,627	14,400
Palestine.....	1,717	10,227	79
Persia.....	1,852	78,496	556
Philippines.....	360,139	935,825	7,267
Rhodesia.....	2,336,885	12,605,312	96,518
Straits Settlements.....	663,065	2,348,725	18,214
Syria.....	25,697	230,052	1,740
Turkey.....	594	33,916	246
Europe			
Austria.....	1,007,430	8,900,843	67,786
Belgo-Luxemburg Union.....	137,121,422	233,586,023	1,797,810
Bulgaria.....	2,909	14,136	99
Crete.....	1	17	—
Czecho-Slovakia.....	15,167,264	50,540,442	383,113
Danzig.....	17,957	31,133	249
Denmark.....	3,640,948	40,618,679	308,881
Esthonia.....	1,754,814	1,550,873	11,844
Finland.....	24,305,642	20,285,562	153,633
France.....	14,360,974	125,346,706	959,753
Germany.....	1,186,915,333	1,270,348,343	9,697,139
Great Britain.....	827,080,262	641,924,538	4,909,124
Greece.....	932,254	3,216,026	24,179
Hungary.....	3,320,706	5,760,857	45,179
Iceland.....	1,176,526	2,905,794	21,630
Ireland (Eire).....	474,784	18,522,334	141,120



**GENERAL MOVEMENT OF IMPORTATION**  
**Quantity and value, according to origin, in 1937**

ORIGIN	Quantity (kilos)	VALUE	
		In milrês	Equivalent in pounds sterling
Italy.....	16,252,131	79,691,960	603,585
Jugoslavia.....	1,273,075	759,188	5,718
Latvia.....	3,581	44,689	322
Lithuania.....	208,900	231,624	1,632
Malta.....	234	1,178	10
Netherlands.....	37,729,167	56,895,224	436,645
Norway.....	16,289,523	18,544,763	142,101
Poland.....	38,592,200	26,253,834	202,758
Portugal.....	17,874,393	68,095,944	519,025
Roumania.....	480	2,692	22
Russia.....	88,750	216,780	1,727
Spain.....	1,828,573	6,284,613	48,417
Sweden.....	90,142,553	117,034,250	891,796
Switzerland.....	1,904,914	38,669,854	296,424
Turkey.....	35,164,268	6,781,373	53,794
<b>North and Central America</b>			
Canada.....	18,431,006	76,407,297	584,214
Costa Rica.....	15,893	37,631	287
Cuba.....	12,384	132,109	1,015
Dutch West Indies.....	684,282,257	147,157,285	1,135,797
Guatemala.....	9,565	21,204	171
Haiti.....	11,600	29,525	214
Martinique.....	66	228	2
Mexico.....	54,378,153	27,415,940	209,721
Newfoundland.....	10,339,335	24,198,806	182,309
Nicaragua.....	2,613	5,481	38
Saint Pierre and Miquelon.....	11,136	31,123	233
Trinidad.....	583,862	287,895	2,284
United States.....	703,376,337	1,228,503,459	9,336,999
<b>South America</b>			
Argentina.....	981,037,559	736,797,051	5,675,012
Bolivia.....	607,820	215,668	1,630
Chile.....	24,023,627	18,256,689	139,222
Ecuador.....	31,031,500	11,683,322	86,714
French Guiana.....	10,770	29,799	223
Paraguay.....	611,809	74,865	557
Perú.....	37,932,910	17,090,880	132,790
Uruguay.....	17,798,965	13,124,198	99,253
<b>Oceania</b>			
Australia.....	64,097	1,061,756	8,088
New Zealand.....	500,000	807,273	6,361
<b>TOTALS.....</b>	<b>5,099,879,972</b>	<b>5,314,551,298</b>	<b>40,607,508</b>

**GENERAL MOVEMENT OF EXPORTATION**  
Quantity and value, according to destination, in 1937

DESTINATION	Quantity (kilos)	VALUE	
		In milréis	Equivalent in pounds sterling
<b>Africa</b>			
Algolia.....	13,446,759	33,777,009	280,481
Belgian Congo.....	34,835	64,593	558
British Southwest Africa.....	176,220	462,404	3,907
Cameroons.....	11,790	23,470	209
Canaries.....	144,000	423,280	3,451
Egypt.....	4,328,266	12,140,364	99,670
French Congo.....	25,456	58,084	489
French Guinée.....	943	1,889	17
Gold Coast.....	4,424	9,874	84
Ivory Coast.....	7,076	11,285	96
Lybia.....	306,780	941,987	8,163
Morocco.....	450,545	1,193,303	10,014
Mozambique.....	480,448	1,392,969	11,693
Nigeria.....	36,719	82,407	703
Senegal.....	84,235	238,439	1,967
Tunis.....	1,145,567	3,056,988	25,128
Union of South Africa.....	11,629,763	19,233,077	160,688
<b>Asia</b>			
British India.....	245,353	1,326,288	11,547
China.....	4,198,560	17,538,684	153,706
Cos.....	12,420	37,640	317
Cyprus.....	483,149	1,298,109	10,040
Goa.....	206	20,000	174
Hong Kong.....	21,279	13,124	115
Indo China.....	236,706	1,110,747	9,887
Iraq.....	6,734	20,103	153
Japan.....	59,864,802	240,335,832	2,122,106
Lero.....	3,360	10,807	88
Mandchuria.....	56,116	220,567	1,871
Palestine.....	622,914	1,647,258	13,058
Philippines.....	733,721	1,364,274	11,618
Rhodes.....	126,300	380,233	3,249
Straits Settlements.....	832	16,190	140
Syria.....	568,204	1,749,379	14,313
Turkey.....	1,290,000	3,831,301	32,671
<b>Europe</b>			
Acores.....	45	1,712	12
Albany.....	380,700	1,034,453	8,505
Austria.....	231,572	729,427	5,820
Belgo Luxemburg Union.....	163,382,284	160,694,400	1,341,971
Bulgaria.....	167,824	524,319	4,366
Czecho-Slovakia.....	22,031,241	32,470,431	271,588
Danzig.....	1,421,662	4,142,689	34,582
Denmark.....	113,287,773	68,162,341	557,476
Estonia.....	137,014	616,712	5,288
Finland.....	14,905,389	39,228,856	320,069
France.....	178,529,440	326,981,602	2,702,585
Germany.....	434,284,093	871,740,582	7,251,813
Gibraltar.....	731,000	2,102,455	17,514
Great Britain.....	472,005,776	458,511,780	3,857,188
Greece.....	5,294,625	15,190,956	126,300
Hungary.....	352,941	1,054,300	8,905
Iceland.....	370,980	1,030,944	8,669
Island of Madeira.....	185,401	253,211	2,092
Italy.....	48,660,197	112,782,417	943,766

**GENERAL MOVEMENT OF EXPORTATION**  
Quantity and value, according to destination, in 1937

DESTINATION	Quantity (kilos)	VALUE	
		In milrêls	Equivalent in pounds sterling
Jugoslavia.....	2,954,183	8,072,723	64,879
Latvia.....	222,360	639,986	5,084
Lithuania.....	39,307	126,087	1,110
Malta.....	242,195	491,362	3,587
Netherlands.....	126,019,360	167,801,223	1,410,405
Norway.....	7,611,825	11,905,313	98,895
Poland.....	7,046,071	28,111,611	239,354
Portugal.....	26,589,226	42,358,739	349,816
Roumania.....	1,139,223	3,303,136	28,066
São Vicente.....	2,810	3,435	29
Spain.....	19,539,037	30,865,410	257,096
Sweden.....	39,045,933	106,664,679	890,838
Switzerland.....	1,010,753	3,118,994	25,553
Turkey.....	4,864,740	14,231,867	120,386
<b>North and Central America</b>			
Bahamas.....	62,541	106,377	854
Barbados.....	950,557	347,284	2,936
Bermudas.....	520,902	246,463	2,097
Canada.....	48,139,467	14,573,584	122,898
Cuba.....	21,393	420,074	3,532
Dutch West Indies.....	230,288	386,379	3,182
Grenada.....	2,496	6,434	51
Honduras.....	80,301	116,093	919
Jamaica.....	75,459	876,497	7,267
Mexico.....	4,283	263,378	2,286
Newfoundland.....	336,798	473,402	4,016
Panamá.....	1,968	34,833	294
Porto Rico.....	207,143	702,180	5,906
São Domingos.....	41,486	454,385	3,859
São Salvador.....	117	11,853	108
Saint Christopher.....	13,801	29,441	229
Trinidad.....	1,167,591	2,067,931	16,797
United States.....	840,756,840	1,850,796,363	15,392,517
<b>South America</b>			
Argentina.....	511,586,466	241,762,891	1,997,792
Bolivia.....	299,599	760,371	6,034
British Guiana.....	127,855	176,908	1,519
Chile.....	10,686,432	14,863,996	122,482
Colombia.....	1,099,474	3,512,946	29,786
Dutch Guiana.....	9,689	32,173	272
Ecuador.....	8,726	269,207	2,153
Falkland Islands.....	245,079	58,688	510
French Guiana.....	3,000	6,760	56
Paraguay.....	978,614	710,782	6,212
Perú.....	143,476	521,065	4,576
Uruguay.....	84,369,738	92,590,587	783,512
Venezuela.....	102,950	2,164,853	17,729
<b>Oceania</b>			
Australia.....	415,418	2,333,513	19,530
Hawaii.....	10,481	23,375	196
New Zealand.....	156,362	1,230,851	10,372
Tasmania.....	16,800	147,450	1,305
<b>TOTALS.....</b>	<b>3,296,345,052</b>	<b>5,092,059,477</b>	<b>42,529,762</b>



# IMPORTS AND EXPORTS, BY FEDERATED UNITS, DURING THE 1936-1937 PERIOD

FEDERATED UNITS	VALUE (pounds sterling)					
	IMPORTS		EXPORTS		Difference + or — of exports compared with Imports	
	1936	1937	1936	1937	1936	1937
Territory of Acre.....	712	—	—	—	— 712	—
Amazonas.....	95,277	162,776	626,028	814,912	+ 530,751	+ 662,137
Pará.....	243,346	383,586	989,453	1,015,138	+ 746,108	+ 631,552
Maranhão.....	99,802	125,635	794,931	1,036,323	+ 695,129	+ 910,688
Piauí.....	32,344	61,889	—	42,108	— 32,344	— 19,781
Ceará.....	324,776	421,592	1,382,857	1,244,866	+ 1,058,081	+ 823,274
Rio Grande do Norte.....	114,218	116,254	387,305	509,606	+ 273,087	+ 393,252
Paraíba.....	207,046	310,942	817,454	954,986	+ 610,408	+ 644,044
Pernambuco.....	1,368,755	1,782,164	1,117,883	1,082,698	— 250,872	— 699,466
Alagoas.....	124,290	167,472	186,993	145,161	+ 62,703	— 12,311
Sergipe.....	19,977	31,984	28,691	33,197	+ 8,714	+ 1,213
Baía.....	644,916	969,094	3,339,624	3,658,233	+ 2,694,708	+ 2,689,139
Espírito Santo.....	24,442	41,669	1,208,294	1,383,624	+ 1,183,852	+ 1,342,055
Rio de Janeiro.....	102,571	116,677	481,086	1,116,376	+ 378,615	+ 999,799
Federal District.....	12,602,983	16,677,788	3,560,016	4,692,187	— 9,042,968	— 11,985,601
São Paulo.....	11,800,529	15,824,010	20,681,545	20,788,059	+ 8,881,016	+ 4,964,049
Paraná.....	361,726	647,458	945,401	1,246,033	+ 583,675	+ 698,575
Santa Catarina.....	235,893	374,505	289,744	402,463	+ 63,851	+ 27,958
Rio Grande do Sul.....	1,617,616	2,471,536	2,121,616	2,204,196	+ 504,000	— 267,340
Mato Grosso.....	44,302	40,678	110,123	159,696	+ 65,821	+ 119,013
TOTALS.....	30,065,520	40,607,508	39,069,043	42,529,762	+ 9,003,523	+ 1,922,254

Note—Exports from Piauí are made via Cajueiro Island which is under the jurisdiction of the State of Maranhão.

## COMMERCIAL AGREEMENTS IN FORCE IN BRAZIL

COUNTRIES	General indications re the Agreements	Principal characteristics, duration and denouncement
Algolia.....	Notes, of the Ministry of State for Foreign Affairs of Brazil, of August 26, 1932, and of the French Embassy in Rio de Janeiro, of July 26 and September 1 of the same year.	Application to Argelian products of the minimum Brazilian tariff, as Brazilian products are subject at Argelian Custom Houses, to duties identical to those charged in France.
Argentina.....	Treaty of Friendship, Commerce and Navigation, signed in the City of Paraná, on March 7, 1856. Text in May 1857 Rep. F. A. Code N. 60.	Reciprocally assures most favoured nation rights, franking privileges and immunities to the diplomatic and consular agents, citizens, ships, natural and manufactured products of both countries.
	Convention re sample exhibitions and sales of National products, signed at Rio de Janeiro, on October 10, 1933. Promulgated by Decree N. ... 24,396, of June 13, 1934. Text published in the "Diario Oficial" (Official Gazette) of June 26, 1934. Entered into force on June 20, 1934.	Cogitates of the installation, by each Government, of permanent sample exhibitions wherein there will be permitted the retail sale of their respective products, in the capital of the other Signatory Party. Grants exemption from Custom House Duties and from any other impost or fiscal onus whatsoever on the products destined for said exhibitions. In case of sale, which will only be permitted on a retail basis, same will pay the usual importation and consumption taxes. Duration: one year. Prorogable by tacit agreement until denounced by means of a three months previous notice.
	Trade Mark Convention, signed at Rio de Janeiro on October 30, 1901. Promulgated by Decree N. ... 5,877, of February 3, 1906. Text in Col. laws, 1906, I, Part 2, page 135.	Trade Marks registered in one of the Signatory Countries, in conformity with the legal precepts governing the matter, can be registered in the other Signatory Country, on complying with the conditions required and regulations in force.
Belgo - Luxemburg Union .....	Touring Development Convention signed at Rio de Janeiro, on October 10, 1933. Promulgated by Decree N. 24,393, of June 13, 1934. Text published in the "Diario Oficial" (Official Gazette) of June 26, 1934. Entered into force on May 21, 1934.	Suppression, in both Signatory Countries, of any impost or tax whatsoever, on the entrance of tourists, citizens of, and proceeding from, the other Signatory Country. Visé facilities for tourists' passports. Free transit rights for the vehicles belonging to tourists from the other Signatory Country. Duration: indeterminate, until denounced by means of a six months previous notice.
	Provisional Commercial Agreement, signed at Rio de Janeiro, by an exchange of Notes, on December 28, 1936. Text in the	Prorogues the Provisional Commercial Agreement of January 14, 1932. Reciprocal, unconditional and unlimited most favoured nation treatment. Duration: indeterminate. Denounce-

## COMMERCIAL AGREEMENTS IN FORCE IN BRAZIL

COUNTRIES	General indications re the Agreements	Principal characteristics, duration and denouncement
Belgo-Luxemburg Union..... (Continued)	"Diario Oficial" (Official Gazette), of February 2, 1932.	ment by means of a three months previous notice. In case one of the Signatory Countries adopts measures against the importation of an article that essentially interests the other Signatory Country, aforesaid denouncement can be made by means of notice given one month in advance.
Bolivia.....	Treaty of Commerce and Fluvial Navigation, signed at Rio de Janeiro, on August 12, 1910. Promulgated by Decree N. . . 8,891, of August 9, 1911. Text in Col. Laws, 1911, II. page 365.	Exempts from any impost whatsoever the transit of persons, baggage and merchandise, on there being complied with, the fiscal and police regulations in force. Exempts from any impost whatsoever, the merchandise in transit through the Amazon, Madeira and Paraguay Rivers, to or from Bolivia, in vessels of any nationality, and, through other determined rivers, in Brazilian or Bolivian vessels. Exempts from payment of duties, except the stamped paper tax, all documents relating to the despatching of warehoused merchandise in transit. There will be no nationalization of merchandise from abroad, exported from Brazil to Bolivia, or vice-versa. Obligatory duration: — 10 years, afterwards continuing in effect, until denounced by means of notice given 12 months in advance.
	Treaty re the exportation and utilization of Bolivian petroleum, signed at Rio de Janeiro, on February 25, 1938. Promulgated by Decree N. 3,131, of October 5, 1938. Published in the "Diario Oficial" (Official Gazette) of October 8, 1938.	Studies in connection with, and borings for, petroleum, shall be made in Bolivia by both Signatory Governments. The expenses defrayed shall be reimbursed by the concerns that obtain the benefit of exploitation, which shall be made by mixed Brazilian — Bolivian companies. The petroleum obtained from the wells, once that the domestic requirements of Bolivia are attended to, is destined for the Brazilian market. Exemption from all fiscal imposts, as a product in transit, for all the Bolivian petroleum exported through Brazilian territory.
	Complemental Agreement to the Treaty of Commerce and Fluvial Navigation of August 8, 1910, signed at Rio de Janeiro, by an exchange of Notes, on August 24, 1938.	Extends minimum tariff privileges, under condition of reciprocity, to Bolivian products and merchandise, imported in Brazil through maritime channels.

## COMMERCIAL AGREEMENTS IN FORCE IN BRAZIL

COUNTRIES	General indications re the Agreements	Principal characteristics, duration and denouncement
Canada.....	Provisional Commercial Agreement, signed at Ottawa, by an exchange of Notes, on June 12, 1937. Entered into effect on June 21, 1937.	The articles of one of the Signatory Countries, imported in the other, shall not be subject to Custom House duties, or other charges, higher than those collected for similar articles, produced, or manufactured in, any other Foreign Country. In force until the conclusion of a Commercial Agreement, being able, however, to be denounced by means of a previous notice of 30 days.
Chile.....	Provisional Commercial Agreement, signed at Rio de Janeiro, by an exchange of Notes, on August 19, 1936.	Reciprocal, unconditional and unlimited most favoured nation treatment. Maintenance of the present régime of non-application of quantity restrictions to reciprocal imposts. Effective until the conclusion of a definitive Treaty. Denounceable by means of 30 days previous notice.
China.....	Treaty of Friendship, Commerce and Navigation, signed at Tien-Tsin, on October 3, 1881. Promulgated by Decree N. 8,561, of August 24, 1882. Text in May 1883, Rep. Cod. F. A. N. 199.	The nationals of both Signatory Countries shall not be obliged to pay, import and export duties higher than those paid by the nationals of Countries enjoying most favored nation treatment. In practise, the interpretation given to the Treaty is that of reciprocal most favored nation treatment, as regards import and export duties. In force for an indeterminate period. Modifications in the Treaty must be proposed six months in advance.
Colombia.....	Treaty of Commerce and Fluvial Navigation, signed at Rio de Janeiro, on August 21, 1908. Promulgated by Decree N. 8,252 of September 26, 1910. Text in the "Diario Oficial" (Official Gazette) of September 20, 1910.  Commercial Agreement, signed at Rio de Janeiro, by an exchange of Notes, on September 12, 1932. Text	Liberty of navigation on the rivers known to be common to both Brazil and Colombia, for the mercantile vessels of the two Signatory Countries. Exemption from any impost whatsoever on merchandise in transit through the Amazon River in vessels of any nationality. The two Signatory Countries shall enjoy the rights and franking privileges relating to commerce and fluvial navigation, granted to other States bordering on the Amazon or its tributaries. Liberty of navigation on the rivers common to both Signatory Countries has been recognized to be of perpetual duration.  (Denounced by Brazil on April 30, 1936). In order to avoid interruption of the commercial relations between the two Countries, the Brazilian Government,



## COMMERCIAL AGREEMENTS IN FORCE IN BRAZIL

COUNTRIES	General indications re the Agreements	Principal characteristics, duration and denouncement
Colombia..... (Continued)	in the "Diario Oficial" (Official Gazette) of September 16, 1932.	in view of the liberal treatment given to Brazilian merchandise in Colombian territory, decided (Note of July 30, 1936, to the Colombian Legation in Rio), to continue to apply to Colombia, reciprocal, unconditional and unlimited most favored nation treatment. This decision can be revoked by means of 30 days notice given in advance.
Czecho-Slovakia....	Provisional Commercial Agreement, signed at Rio de Janeiro, on July 22, 1936. Entered into effect on August 1, 1936.	Reciprocal, unconditional and unlimited, most favored nation treatment, excepting as regards the favors granted by Czecho-Slovakia to the States of Central Europe or to those of South-Eastern Europe and those conceded by Brazil to bordering countries. The Agreement can be denounced by means of a 30 days previous notice.
Denmark.....	Declaration for the protection of Trade Marks, signed at Rio de Janeiro, on April 25, 1881. Promulgated by Decree N. 8,129, of June 11, 1881. Text in January 1882 Rep; Cod. F. A. N. 224.  Provisional Commercial Agreement, signed at Rio de Janeiro, by an exchange of Notes, on July 30, 1936.	Establishes equal rights for the nationals of both Signatory Countries, in all that relates to Trade Marks.  Reciprocal, unconditional and unlimited most favored nation treatment. There are excluded the favors granted to Iceland, Norway or Sweden and those that are intended to facilitate frontier traffic or relate to a Custom House Union. The most favored nation treatment shall be applied to the products having their origin in, and coming from, Greenland, imported in Brazil, and vice-versa. In force until the conclusion of a definitive Agreement. Denouncement: by 30 days previous notice.
Ecuador.....	Provisional Commercial Agreement, signed at Rio de Janeiro, by an exchange of Notes, on July 24, 1936.	Maintains the régime of reciprocal concession of minimum Custom House tariffs. The favors granted to the respective mercantile marines will not be altered. In effect until the conclusion of a definitive Agreement. The Agreement can be denounced on 30 days notice being given in advance.
Egypt.....	Commercial Agreement, signed at Cairo, by an exchange of Notes, on May 13, 1930. Text in Col. A.I. N. 34.	Reciprocal most favored nation treatment, with the exception of the régime established for Sudanese products, or that applied to those of certain neighboring countries, in virtue of Regional Conventions.

## COMMERCIAL AGREEMENTS IN FORCE IN BRAZIL

COUNTRIES	General indications re the Agreements	Principal characteristics, duration and denouncement
Finland.....	Commercial Agreement Adjustment signed at Rio de Janeiro, by an exchange of Notes, on July 21 and 22, 1936. Text in the "Diario Oficial" (Official Gazette) of December 31, 1931.	Prolongs the term of the Commercial Agreement of November 26, 1931. Reciprocal, unconditional and unlimited most favored nation treatment, with the exception of the favors that Finland grants to Estonia, Latvia and Lithuania. In force until the conclusion of a definitive Agreement. Denouncement: by means of a previous 30 days notice.
France.....	Declaration for the protection of Trade Marks, signed at Rio de Janeiro, on April 12, 1876. Promulgated by Decree N. ... 6.237, of June 21, 1876. Text in January 1877 Rep.	Establishes equal rights for the nationals of both Signatory Countries, in all that relates to Trade Marks.
	Commercial and Financial Agreement, signed at Rio de Janeiro, by an exchange of Notes, on May 11, 1934. Text in the "Diario Oficial" (Official Gazette) of July 7, 1934. Became effective on May 14, 1934, (except the minimum tariff concession for bananas, oranges and all other citrus fruits, which only entered into force on September 1, 1934).	Reciprocal application of the minimum Custom House tariff, excepting, however, in the imports by France, chinaware, anilines, wollen fabrics and yarn, silk fabrics and thread, coal, wheat, paper in general and cigarette paper, from Brazil, and, in the imports by Brazil, gunpowder, cotton seed oil, cornmeal, refrigerators, calculating machines, lime, corn in bulk, hops, barley in bulk and coal, from France. There are reserved for Brazil, annually, the following minimum import quotas: 2,000,000 bags (60 kg) of coffee; a contingent of at least 12% of the total contingent of frozen beef, and a contingent of at least 0.5% of the full quota of bananas. As regards all other products, if contingents be established, the quota attributed to Brazil must be equal to the average proportion that its produce has obtained, in the general imports of France, during the last period of normal commerce. Duration: one year, continuing tacitly in force for an indeterminate period until denounced by a previous notice of 3 months.
	Complementary Commercial Agreement, signed at Paris, by an exchange of Notes, on March 4, 1936, and immediately became effective.	Extends to Brazilian and French products (the last named ones were already in the enjoyment of minimum tariff rights, in virtue of the Agreement of May 11, 1934), respectively in France and in Brazil, the advantages conceded to the products of a third country, both as regards Custom

## COMMERCIAL AGREEMENTS IN FORCE IN BRAZIL

COUNTRIES	General indications re the Agreements	Principal characteristics, duration and denouncement
France..... (Continued)		House duties and domestic taxes. Quarterly contingents for Brazilian oranges: 1% in the first, 0.5% in the second, 2.9% in the third and 11% in the fourth quarter, respectively. Duration: identical to that of the Agreement of May 11, 1934.
French Morocco...	Notes, of the Ministry of State for Foreign Affairs of Brazil, of August 26, 1932, and of the French Embassy in Rio de Janeiro, of July 26, and September 1, 1932.	Application of the minimum tariff to the products having their origin in French Morocco, in view of the fact that imported Brazilian products enjoy there the same advantages as those imported from France.
Germany.....	Provisional Commercial Agreement, signed at Rio de Janeiro, by an exchange of Notes, on June 8, 1936.	Reciprocal most favoured nation treatment, unconditional and unlimited. In force until the conclusion of a Treaty of Commerce, but can be denounced by means of a three months previous notice.
Great Britain.....	Provisional Commercial Agreement, signed at London, by an exchange of Notes, on August 10, 1936, and immediately became effective.	Reciprocal treatment not less favourable than that conceded to any other Foreign Country. Under condition of reciprocity, the same treatment is granted to the products of the Colonies, Protectorates and Territories of Great Britain. There are excepted the favours granted by Great Britain exclusively to the Territories under its dominion, Ireland and British Overseas Dominions, or under British suzerainty, protection or mandate, and the favours conceded by Brazil to bordering Countries, or those resulting from a Custom House Union. There will be no discrimination of one Government against the other, nor against persons (including companies) in the regulating of exchange matters. In force until denounced by 3 months previous notice.
	According to the Note of the British Embassy, of January 8, 1932, the following Colonies and Protectorates grant to Brazilian products, most favoured nation treatment as regards Custom House Duties: In Africa:— 1. British West Africa: a) Gold Coast Colony —	Treatment no less favourable than that conceded to any other Foreign Country, in virtue of the reciprocity condition hereinbefore cited.

## COMMERCIAL AGREEMENTS IN FORCE IN BRAZIL

COUNTRIES	General indications re the Agreements	Principal characteristics, duration and denouncement
Great Britain..... (Continued)	<p>Ashanti — Northern Territories — Togoland, under British mandate; <i>b</i>) Gambia (Colony and Protectorate); <i>c</i>) Nigeria — (Colony and Protectorate). — 2. Mauritius Islands. 3. Northern and Southern Rhodesia. — 4. Nyassaland (Protectorate). — 5. St. Helena and Ascension. — 6. Seychelles. — 7. British Somaliland. 8. Tanganyika (Territory of). — 9. Uganda. — 10. Kenya (Colony and Protectorate). 11. Zanzibar.</p> <p>In Central America and the West Indies :</p> <p>1. Bahamas. — 2. Barbadoes. — 3. Bermuda. — 4. British Honduras. — 5. Jamaica, including Turks and Caicos Islands and the Cayman Islands. — 6. Leeward Islands : Antigua, — Dominica, — Virgin Islands, — Montserrat, — St. Christopher and Nevis. — 7. Trinidad and Tobago. — 8. Windward Islands: Grenada, St. Vincent and Santa Lucia.</p> <p>In South America : — 1. Falkland Islands and dependencies. — 2. British Guiana.</p> <p>In Asia : — 1. Ceylon. — 2. Cyprus. — 3. Straits Settlements and dependencies. — 4. British Borneo : North Borneo, Brunei and Sarawak. — 5. Federated Malay States : Negri, Sembilan, Pahang, Perak and Selangor. — 6. Non-Federated Malay States : Johore, Kedah, Kelantan, Perlis, and Trengganu. — 7. Hong Kong. — 8. Palestine and Transjordan. (British Embassy Note of February 14, 1938).</p> <p>In Europe : — 1. Gibraltar. — 2. Malta.</p>	(Description in preceding page).



## COMMERCIAL AGREEMENTS IN FORCE IN BRAZIL

COUNTRIES	General indications re the Agreements	Principal characteristics, duration and denouncement
Great Britain..... (Continued)	In Oceania : — 1. Fidji Islands. — 2. British Solomon Islands. — 3. Gilbert and Ellice Islands. — 4. Tonga.	
Greece.....	Provisional Commercial Agree- ment, signed at Athens, by an exchange of Notes, on May 15, 1933. Text in the "Diario Oficial" (Official Gazette) of Octo- ber 28, 1933. Became ef- fective on May 15, 1933.	Reciprocal most favored nation treat- ment. There are excluded the favors granted to bordering countries. Dur- ation : one year. Can be prorogued by tacit agreement. Denouncement : by means of 3 months previous no- tice.
Hungary.....	Provisional Commercial Agree- ment, signed at Rio de Janeiro, by an exchange of Notes, on July 30, 1936.	Prorogues the Agreement of December 24, 1931. Reciprocal, unconditional and unlimited, most favored na- tion treatment, excepting the favors conceded to bordering countries and those resulting from a Custom House Union. In force until the conclusion of a definitive Treaty. Can be de- nounced by 30 days previous notice.
India.....	Commercial Agreement, sign- ed at Rio de Janeiro, by an exchange of Notes, on July 21, 1932. Text in the "Diario Oficial" (Official Gazette) of July 27, 1932.	Reciprocal most favoured nation treat- ment, excepting the favours granted to the British Dominions or to the Territories under the protection of the British Government, and the advantages given to neighbouring co- untries or resulting from a Custom House Union. Denouncement : by means of 6 months previous notice.
Ireland (Eire).....	Provisional Commercial Agree- ment, signed at Rio de Janeiro, by an exchange of Notes, on July 24, 1936. In force on and after August 1, 1936.	Prorogues the Agreement of October 16, 1931 (Published in the "Diário Oficial" (Official Gazette) on the twenty ninth day of the same month). Reciprocal most favoured nation treatment. There is safeguarded for Ireland the right to modify, maintain or extend the preferential treatment accorded to any State of the British Common- wealth of Nations. There are also excepted the favours granted to bor- dering countries, or those resulting from a Custom House Union. The Agreement can be denounced by means of a 30 days previous notice.
Iceland.....	Provisional Commercial Agree- ment, signed at Rio de Janeiro, by an exchange of Notes, on July 30, 1936.	Reciprocal, unconditional and unlimited, most favored nation treatment, ex- cepting the favors granted to border- ing countries, or those resulting from a Custom House Union, or, moreover, those granted by Iceland to Den-

## COMMERCIAL AGREEMENTS IN FORCE IN BRAZIL

COUNTRIES	General indications re the Agreements	Principal characteristics, duration and denouncement
Iceland..... (Continued)		mark. In force until the conclusion of a definitive Agreement. Denouncement: by means of 30 days previous notice.
Italy.....	Provisional Commercial Agreement, signed at Rio de Janeiro, by an exchange of Notes, on August 14, 1936.	Reciprocal, unconditional and unlimited, most favored nation treatment, excepting the favors granted to bordering countries, or those resulting from a Custom House Union. Special warehousing and transit facilities for coffee at the ports of Genoa and Trieste. In effect until the conclusion of a Treaty of Commerce. Denouncement: by means of 3 months previous notice.
Japan.....	Treaty of Friendship, Commerce and Navigation, signed at Paris, on November 5, 1895. Promulgated by Decree N. 2,489, of March 31, 1897. Text in May 1897 Rep. An. N. 3, p. 54; Cod. F.A., N. 474. — Exchange of verbal Notes of September 19, 1931 (Japanese Embassy at Rio de Janeiro) and of the twenty ninth of the same month (Ministry of State for Foreign Affairs of Brazil).	Application to the products of one Signatory Country in the other Signatory Country, of the respective minimum tariffs. Reciprocal, unconditional and unlimited, most favored nation treatment. Obligatory for the term of 12 years. At the end of 11 years, the Treaty can be denounced by means of a previous notice of one year.
Latvia.....	Commercial Agreement, signed at Paris, by an exchange of Notes, on September 21, 1932. Text in the "Diário Oficial" (Official Gazette) of November 3, 1932.	Reciprocal, unconditional and unlimited, most favored nation treatment, excepting the favors granted to bordering countries and those resulting from a Custom House Union, as well as the favors conceded by Latvia to Esthonia, Finland, Lithuania and the U.S.S.R. Duration: 3 years, continuing in force until denounced by means of a 3 months previous notice.
Lithuania.....	Provisional Commercial Agreement, signed at Rio de Janeiro, by an exchange of Notes, on September 28, 1937. Published in the "Diário Oficial" (Official Gazette) of October 13, 1937.	Reciprocal, most favored nation treatment, there being excepted the special favors conceded by Lithuania to Esthonia and Latvia and those granted to bordering countries, or those resulting from a Custom House Union. The Agreement can be denounced by means of 30 days notice

## COMMERCIAL AGREEMENTS IN FORCE IN BRAZIL

COUNTRIES	General indications re the Agreements	Principal characteristics, duration and denouncement
Lithuania ..... (Continued)		given in advance, (or 15 days in case of one of the Signatory Countries establishing import restrictions, to the prejudice of the other).
Mexico.....	Provisional Commercial Agreement, signed in the City of Mexico, by an exchange of Notes, on July 30, 1936.	Reciprocal, unconditional and unlimited, most favored nation treatment. In effect until the conclusion of a definitive Agreement, but can be denounced on 30 days notice being given in advance.
Netherlands (including Dutch East Indies, Dutch Guiana and Curaçao)	Provisional Commercial Agreement, signed at Rio de Janeiro, by an exchange of Notes, on March 15, 1937.	Reciprocal, most favored nation treatment, excepting the favors granted to bordering countries and those resulting from a Custom House Union. In force until the conclusion of a Treaty of Commerce, but can, however, be denounced by means of notice given 60 days in advance (or 30 days in case one of the Signatory Countries establishes import restrictions to the prejudice of the other Signatory Country).
Newfoundland.....	Provisional Commercial Agreement Adjustment, signed in London, by an exchange of Notes, on August 10, 1936.	Reciprocally maintains the same rights in force pursuant to the Agreement of 1932 (which granted to the products of each Signatory Country, in the other Signatory Country, a treatment not less favourable than that conceded to the products of the most favoured Foreign Country). Denouncement: by means of 30 days previous notice.
New Zealand.....	Commercial Agreement, signed at Rio de Janeiro, by an exchange of Notes, dated March 15 and 19, 1932.	Application to the products of one Signatory Country, in the other Signatory Country, of a treatment not less favourable than that conceded to the products of the most favoured Foreign Nations. The Agreement can be denounced by means of a previous notice of 30 days.
Norway.....	Provisional Commercial Agreement, signed at Rio de Janeiro, by an exchange of Notes, on July 27, 1936.	Reciprocal, unconditional and unlimited, most favoured nation treatment, excepting the favours granted to bordering countries or in virtue of a Custom House Union, and the special concessions made by Norway to Denmark and Sweden. Normal imports of Brazilian coffee will not be limited.

## COMMERCIAL AGREEMENTS IN FORCE IN BRAZIL

COUNTRIES	General indications re the Agreements	Principal characteristics, duration and denouncement
Norway..... (Continued)		Norwegian preserved fish will enjoy equal Custom House treatment in Brazil. In force until the conclusion of a definitive Agreement, but can be denounced on fifteen days notice being given in advance.
Peru.....	Treaty to complete the determination of the frontiers between the two Signatory Countries and to establish general principles re commerce and navigation in the Amazon basin, signed at Rio de Janeiro, on September 8, 1909. Promulgated by Decree N. 7,975, of May 2, 1910. Text in the "Diário Oficial" (Official Gazette) of May 5, 1910.	Perpetually recognizes the principle of the most ample liberty of terrestrial and fluvial transit. Peruvian vessels intended to navigate on certain rivers, shall have free access to the sea, through the Amazon River. Peru can have Custom House Officers in the Custom Houses at Manaus and Belém (Pará) and, reciprocally, Brazil can maintain Custom House Officers at the Iquitos Custom Houses.
	Provisional Commercial Agreement, signed at Rio de Janeiro, by an exchange of Notes, on July 27, 1936.	Reciprocal, most favored nation treatment. In force until the conclusion of a definitive Commercial Treaty, but can be, however, denounced by means of 30 days previous notice.
Poland (including the Free City of Danzig) .....	<i>Modus-vivendi</i> , signed at Rio de Janeiro, by an exchange of Notes, on July 31, 1936.	Prorogues the effective term of the Commercial Agreement of February 3, 1932. Reciprocal, unconditional and unlimited most favored nation treatment, with the exception of the favors resulting from the provisional Custom House system established between the Polish and German parts of High Silesia. Can be denounced by a previous notice of 30 days.
Portugal.....	Treaty of Commerce and Navigation, signed at Rio de Janeiro, on August 26, 1933. Promulgated by Decree N. 23,933, of February 27, 1934. Text in the "Diário Oficial" (Official Gazette) of March 1, 1934.	Reciprocal, unconditional and unlimited, most favored nation treatment, excepting the favors conceded to bordering countries and those resulting from a Custom House Union. Mutual obligation to combat unfair competition. The Portuguese Government will protect, in its territory, certain brands of Brazilian coffee and the Brazilian Government will protect, in its territory, certain brands of Portuguese wine. Duration: one year. Prorogable by tacit consent. Denouncement: by means of 3 months previous notice.



## COMMERCIAL AGREEMENTS IN FORCE IN BRAZIL

COUNTRIES	General indications re the Agreements	Principal characteristics, duration and denouncement
Roumania .....	Provisional Commercial Agreement, signed at Rio de Janeiro, by an exchange of Notes, on August 24, 1936.	Reciprocal, unconditional and unlimited, most favored nation treatment, there being excepted the favors granted to bordering countries and those resulting from a Custom House Union. The importation of Brazilian products in Roumania shall be authorized to an amount equal to the average of the value of Brazilian imports from Roumania during the 3 years of the 1934 — 36 period. Any limitation of imports, by one of the Signatory Countries, to the prejudice of the other Signatory Country, gives to same the right to declare the Agreement terminated. In effect until the conclusion of a definitive Agreement, but can be denounced on 30 days notice being given in advance.
Spain .....	Provisional Commercial Agreement Adjustment, signed at Rio de Janeiro, by an exchange of Notes, on September 15, 1936.	Maintains the régime of the Agreement of December 31, 1925, pursuant to which Brazilian products imported in Spain pay the duties figuring in the second column of the Spanish Custom House tariff, and Spanish products imported in Brazil pay Brazilian minimum tariff duties. In effect until the conclusion of a definitive Agreement. The Brazilian Government has reserved the right of denouncement by means of 30 days previous notice.
Sweden .....	Commercial Agreement Adjustment, signed at Rio de Janeiro, by an exchange of Notes, on July 28, 1936. Entered into force on August 1, 1936.	Prorogues the Commercial Agreement of October 16, 1931. Reciprocal, unconditional and unlimited most favoured nation treatment, excepting as regards the favors granted to bordering countries and those resulting from a Custom House Union. Denouncement: by 30 days previous notice.
Switzerland .....	Provisional Commercial Agreement, signed at Rio de Janeiro, by an exchange of Notes, on July 24, 1936. Entered into effect on August 1, 1936.	Prolongs the régime of the Commercial Agreement of October 29, 1931. Reciprocal, unconditional and unlimited, most favored nation treatment, with the exception of the favors conceded to bordering countries and of those resulting from a Custom House Union. Fixes import contingents for rice,

## COMMERCIAL AGREEMENTS IN FORCE IN BRAZIL

COUNTRIES	General indications re the Agreements	Principal characteristics, duration and denouncement
Switzerland..... (Continued)		unroasted coffee and soling leathers from Brazil, in Switzerland. In effect until the conclusion of a Treaty of Commerce. Can be denounced by means of a previous notice of 30 days.
Syria and Libanon.	Commercial Agreement, signed at Beyrouth, by an exchange of Notes, on February 24, 1933. Text in the "Diário Oficial" (Official Gazette) of April 24, 1933. Entered into effect on March 1, 1933.	Most favored nation treatment for the products of the Levant States under French Mandate, there being excepted the favors granted by Brazil to bordering countries and those resulting from a Custom House Union. Reciprocating, the Levant States under French Mandate will treat Brazil in a manner identical to the treatment given to Member States of the League of Nations, there being excepted the favors resulting from special Custom House Agreements with bordering countries. Term of one year, renewable by tacit consent. Can be denounced on there being given 3 months notice in advance.
Tunis.....	Notes, of the Ministry of State for Foreign Affairs of Brazil, of August 26, 1932, and of the French Embassy in Rio de Janeiro, of July 26 and September 1, 1932.	Application of the minimum tariff to products having their origin in Tunis, in view of the fact that imported Brazilian products enjoy there advantages identical to those granted to products from France.
Turkey.....	Provisional Commercial Agreement Adjustment, signed in Paris, by an exchange of Notes, on March 9, 1938.	Prorogues the Commercial Agreement of July 2, 1933. Reciprocal, unconditional and unlimited, most favored nation treatment, with the exclusion of Brazilian products, from the tariff advantages conceded by Turkey, to the countries dismembered from the old Ottoman Empire. Brazilian coffee will continue, in Turkey, to be free from the régime of quotas and restrictions. Duration: one year counting from January 1, 1938. In force until denounced by a previous notice of 30 days.
Union of South Africa .....	Notes, of the British Embassy in Rio de Janeiro, of April 7, 1932, and of the Ministry of State for Foreign Affairs of Brazil, of the eleventh of the same month.	Treatment, for the products of one Signatory Country, in the other Signatory Country, not less favourable than that given to the products of any other Country, with the exception, for Brazilian products in the South African Union, of any advan-

## COMMERCIAL AGREEMENTS IN FORCE IN BRAZIL

COUNTRIES	General indications re the Agreements	Principal characteristics, duration and denouncement
Union of South Africa ..... (Continued)		tages whatsoever conceded to British Dominions or to territories under British protection or mandate, and, moreover, with the exception of certain concessions made to the neighbouring territory of Mozambique (Moçambique).
United States.....	<p>Trade Mark Agreement, signed at Rio de Janeiro, by an exchange of Notes, on September 24, 1878. Promulgated by Decree N... 7,721, of May 10, 1879. Text in May 1880 Rep.; Cod. F.A., N. 255.</p> <p>Treaty of Commerce, signed at Washington, on February 2, 1935. Promulgated by Decree N. 542, of December 24, 1935. Text in the "Diário Oficial" (Official Gazette) of December 30, 1935.</p>	<p>Establishes equal rights for the nationals of both Signatory Countries, in all that relates to Trade Marks.</p> <p>Reciprocal, unconditional most favored nation treatment, without any restrictions whatsoever. Two tables annexed to the Treaty, enumerate certain articles of Brazil and the U.S.A. and the respective duties to be paid on same. There are excepted from the application of the Treaty the advantages granted to bordering countries, and those resulting from a Custom House Union, as well as those relating to commerce between the U.S.A. and the Republic of Cuba, and between the U.S.A. and the Panama Canal Zone, Philippine Islands or any United States territory or possession. Entered into force on January 1, 1936. Denouncement: by means of a previous notice of six months.</p>
Uruguay.....	Treaty of Commerce and Navigation, signed at Rio de Janeiro, on August 25, 1933. Promulgated by Decree N. 23,710, of January 9, 1934. Text in the "Diário Oficial" (Official Gazette) of January 15, 1934. Entered into effect on December 20, 1933.	Reciprocal, most favored nation treatment, as regards duties and any other imposts or taxes whatsoever operating imports or exports. Free warehousing in the fiscal depots of the Uruguayan Government for merchandise in transit for, or proceeding from, Brazil. Facilities for merchandise shipped at Mato Grosso ports for other Brazilian ports, via Montevideo. Facilities and exemption from Custom House and Port Charges for Brazilian and Uruguayan vessels. Exemption from

## COMMERCIAL AGREEMENTS IN FORCE IN BRAZIL

COUNTRIES	General indications re the Agreements	Principal characteristics, duration and denouncement
Uruguay ..... (Continued)	<p data-bbox="352 1577 647 1709">Convention to promote touring, signed at Montevideo, on December 20, 1933. Promulgated by Decree N. 1,846, of August 3, 1937.</p>	<p data-bbox="701 408 1087 1508">Consular imposts on commercial products in transit between the two Signatory Countries. Full exemption from Custom House Duties, in either of the two Signatory Countries, for the following products, imported across their terrestrial frontiers : manioc flour, ovine and equine livestock, bovine and ovine breeders (i.e. pedigree or thoroughbred bulls and rams), poultry, forage, verdure, fresh vegetables, eggs, butter, lard, cheese, cream, maize, flax, oats, barley, oleaginous seeds and shells, leaves and plants for tanning purposes. Complete exemption from Custom House Duties on the following annual quotas : ten thousand tons of wheat or its equivalent in flour; four thousand tons of potatoes; eight thousand tons of Brazilian pine, sawn into boards and planks; two hundred thousand head of bovine cattle for slaughterhouse and winter grazing purposes. Exemption from payment of duties on two thousand tons of Uruguayan jerked beef, whether transported by an Uruguayan or a Brazilian vessel, bound for Brazilian ports, said exemption being also granted to four thousand tons of mutton, transported in vessels sailing under any flag whatsoever and bound for any port in Brazil. Exemption from the payment of duties, in Uruguay, for salt proceeding from Northern Brazilian ports, i. e., from, and including, State of Pernambuco ports, to the North of the country, and destined for use at the "xarqueadas" (the establishments where jerked beef is prepared) on Uruguayan territory. Annual revision of the lists of products enjoying the benefits of the duty exemption hereinbefore mentioned. Term of three years, but said term can be extended by tacit consent and can be denounced on 6 months notice being given in advance.</p> <p data-bbox="665 1577 1087 1709">Facilities intended to increase touring between the two Signatory Countries. No charge to be made for visé on tourists passports. Duration : indeterminate. Denouncement : by means of 6 months previous notice.</p>



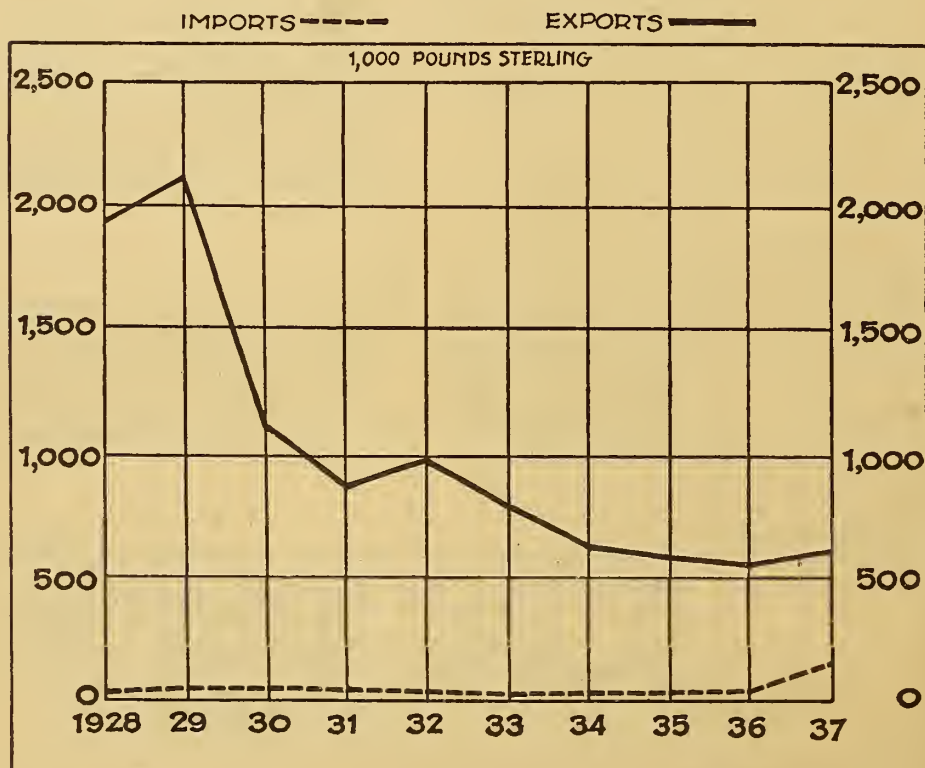
## COMMERCIAL AGREEMENTS IN FORCE IN BRAZIL

COUNTRIES	General indications re the Agreements	Principal characteristics, duration and denouncement
Uruguay ..... (Continued)	<p>Convention on Sample Exhibitions for the sale of National Products, signed at Montevideo, on December 20, 1933. Promulgated by Decree N. 1,846, of August 3, 1937. Entered into force on August 20, 1937.</p> <p>Agreement for the interchange of Fruit, signed at Rio de Janeiro, by an exchange of Notes, on November 23, 1935. Entered into effect 20 days after having been signed.</p>	<p>Installation in Rio de Janeiro and Montevideo of permanent sample showrooms for the propaganda and sale of the products of each one of the Signatory Countries, in the other Signatory Country. Exemption from duties, for products intended for said exhibitions, and payment of said duties in case of sale, which can only be made on a retail basis. Term of one year, but same can be extended by tacit consent. Denouncement by means of 3 months notice, given in advance.</p> <p>Reciprocal exemption from duties, for the fruit of one Signatory Country, imported in the other Signatory Country, with the exception of Brazilian oranges, tangerines and bananas. The two first mentioned fruits will continue to pay the same duties, and the bananas shall have a reduction of 50%. Exemption from the payment of duties, for Brazilian pine, imported in Uruguay via its terrestrial and fluvial frontiers. On an equal favor being granted to a non-bordering country, same shall be made extensive to Brazil, for importation through the seaports.</p>
Venezuela.....	Note of September 30, 1936, to the Venezuelan Legation in Rio de Janeiro. This step was taken in view of the fact that Venezuela has only one Custom House tariff.	The Government of Brazil continues to apply the minimum tariff to the products of Venezuela, granting to that country, besides this, most favored nation treatment. There is reserved the right of modifying the <i>statu quo</i> by means of 30 days notice, given in advance.
Yugo - Slavia (Jugo-Slavia).....	Commercial Agreement, signed at Belgrade, by an exchange of notes, on May 16, 1932. Text in the "Diário Oficial" (Official Gazette) of July 13, 1932.	Reciprocal, unconditional and unlimited, most favored nation treatment, there being excepted the favors granted to bordering countries, or those resulting from a Custom House Union. Duration: one year. Tacitly prorogable until denounced by means of a 3 months previous notice.

## BRAZILIAN TRADE WITH AFRICA

Importation and exportation during the 1918-1937 period

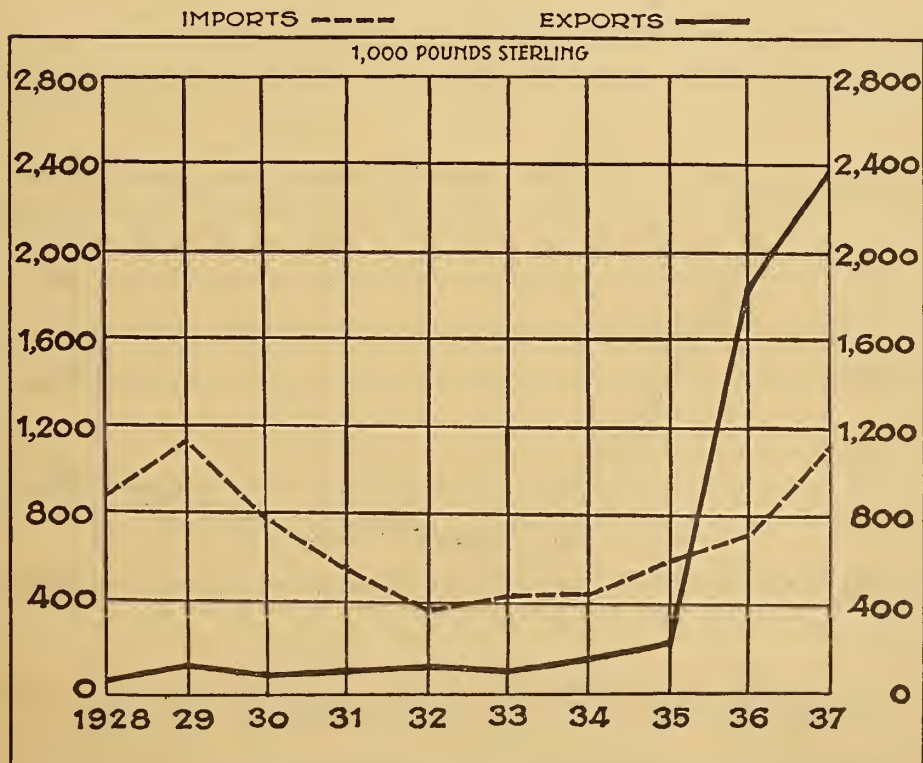
YEARS	VALUE (In pounds sterling)			INDEX NUMBERS	
	Brazilian imports	Brazilian exports	Difference	Imports	Exports
1918.....	7,701	738,172	730,471	100	100
1919.....	59,013	1,684,240	1,625,227	766	228
1920.....	169,796	1,730,446	1,560,650	2,205	234
1921.....	43,328	1,130,186	1,086,858	563	153
1922.....	19,849	1,674,951	1,655,102	258	227
1923.....	17,652	1,638,475	1,620,823	229	222
1924.....	37,533	2,101,894	2,064,361	489	285
1925.....	32,682	2,195,945	2,163,263	424	297
1926.....	78,937	1,901,333	1,822,396	1,025	258
1927.....	85,717	2,015,873	1,930,156	1,113	273
1928.....	31,205	1,935,947	1,904,742	405	262
1929.....	56,643	2,151,726	2,095,083	735	291
1930.....	58,831	1,151,930	1,093,099	764	156
1931.....	37,417	899,947	862,530	486	122
1932.....	31,544	995,251	963,707	410	135
1933.....	21,748	800,883	779,135	282	108
1934.....	12,705	631,760	619,055	165	86
1935.....	20,880	582,467	561,587	271	79
1936.....	32,703	557,217	524,514	425	75
1937.....	159,986	609,410	449,424	2,077	82



## BRAZILIAN TRADE WITH ASIA

Importation and exportation during the 1918-1937 period

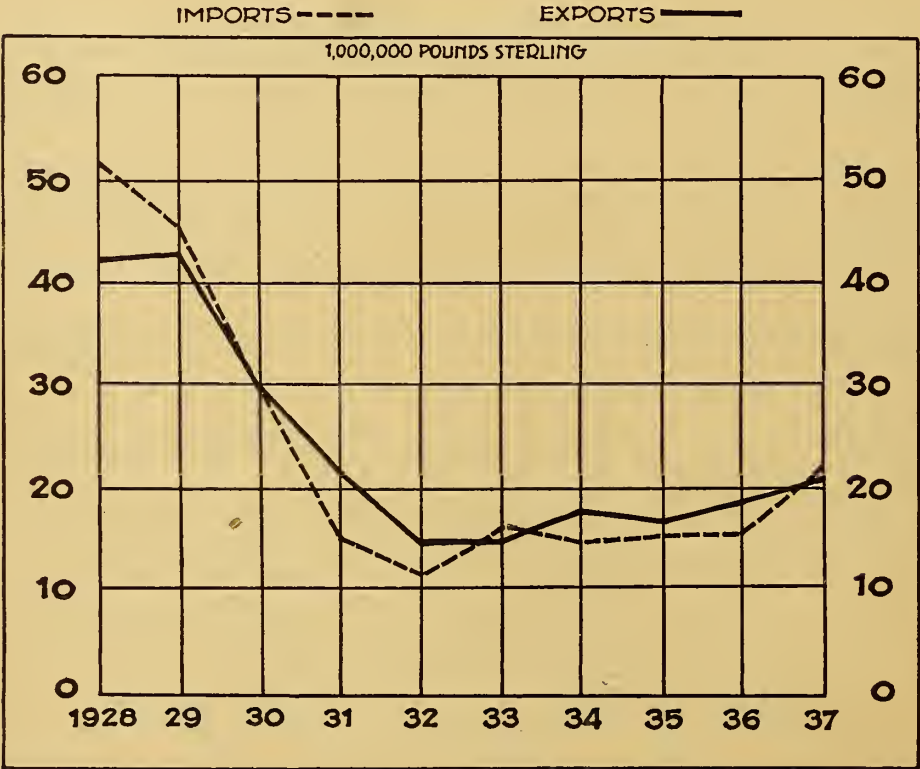
YEARS	VALUE (in pounds sterling)			INDEX NUMBERS	
	Brazilian imports	Brazilian exports	Difference	Imports	Exports
1918.....	1,022,527	16,897	1,005,630	100	100
1919.....	2,232,432	73,888	2,158,544	218	437
1920.....	1,888,294	35,863	1,852,431	185	212
1921.....	1,210,150	17,449	1,192,701	118	103
1922.....	614,098	65,219	548,879	60	386
1923.....	1,017,101	81,088	936,013	99	480
1924.....	801,591	74,133	727,458	78	439
1925.....	1,354,614	44,914	1,309,700	132	266
1926.....	1,143,658	78,375	1,065,283	112	464
1927.....	1,125,053	70,596	1,054,457	110	418
1928.....	870,778	61,110	809,668	85	362
1929.....	1,141,505	125,378	1,016,127	112	742
1930.....	793,368	89,089	704,279	78	527
1931.....	586,709	95,479	491,230	57	565
1932.....	397,832	140,833	256,999	39	833
1933.....	422,217	103,467	318,750	41	612
1934.....	450,771	166,639	284,132	44	986
1935.....	607,138	217,608	389,530	59	1,288
1936.....	712,424	1,821,525	1,109,101	70	10,780
1937.....	1,116,873	2,385,053	1,266,180	109	14,115



BRAZILIAN TRADE WITH EUROPE

Importation and exportation during the 1918-1937 period

YEARS	VALUE (In pounds sterling)			INDEX NUMBERS	
	Brazilian imports	Brazilian exports	Difference	Imports	Exports
1918.....	18,639,501	22,769,047	4,129,546	100	100
1919.....	22,416,206	62,118,664	39,702,458	120	273
1920.....	55,384,368	47,925,159	7,459,209	297	210
1921.....	29,463,301	28,300,550	1,162,751	158	124
1922.....	27,815,750	32,699,594	4,883,844	149	144
1923.....	30,219,055	34,270,290	4,051,235	162	151
1924.....	39,732,952	43,742,698	4,009,746	213	182
1925.....	48,669,007	45,402,826	3,266,181	261	199
1926.....	43,450,805	37,894,144	5,556,661	233	166
1927.....	42,857,105	37,162,351	5,694,754	229	163
1928.....	51,304,538	42,030,185	9,274,353	275	185
1929.....	45,884,073	42,708,477	3,175,596	246	188
1930.....	28,678,928	29,479,393	800,465	154	129
1931.....	14,556,515	21,735,862	7,179,347	78	95
1932.....	11,482,024	14,931,093	3,449,069	62	66
1933.....	16,359,889	14,958,819	1,401,070	88	66
1934.....	14,216,786	17,687,308	3,470,522	76	78
1935.....	15,236,980	16,464,717	1,227,737	82	72
1936.....	15,521,894	18,838,371	3,316,477	83	83
1937.....	21,725,515	20,961,486	764,029	117	92





## BRAZILIAN TRADE WITH NORTH AND CENTRAL AMERICA

Importation and exportation during the 1918-1937 period

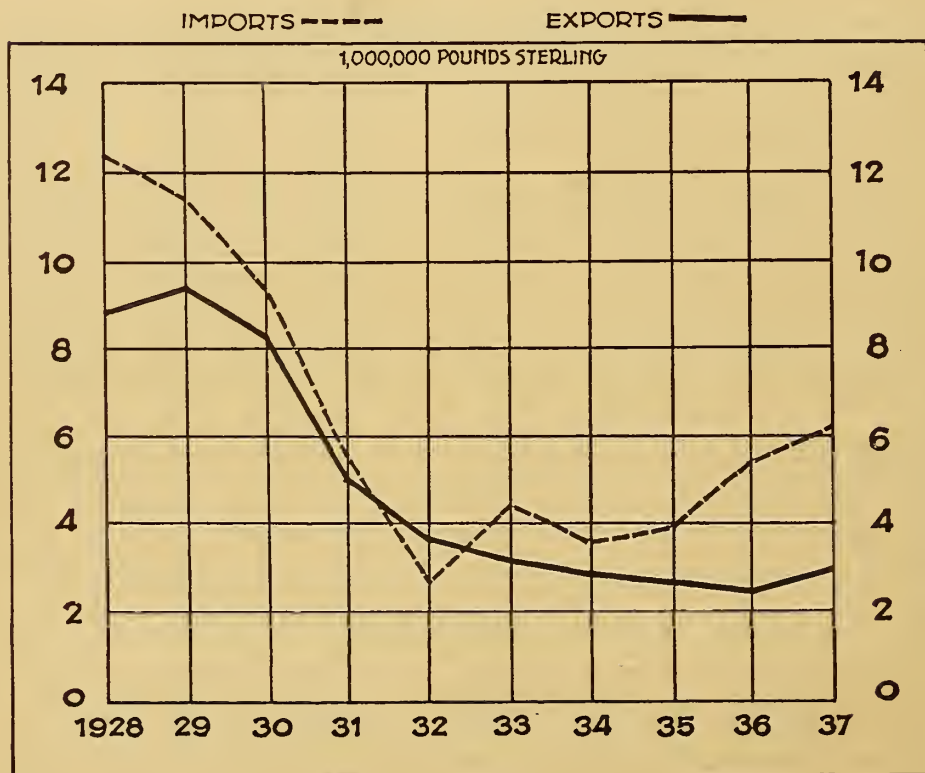
YEARS	VALUE (In pounds sterling)			INDEX NUMBERS	
	Brazilian Imports	Brazilian exports	Difference	Imports	Exports
1918.....	20,830,992	21,702,774	871,782	100	100
1919.....	39,467,456	54,299,076	14,831,620	189	250
1920.....	55,252,716	45,490,362	9,762,354	265	210
1921.....	21,995,562	21,827,144	168,418	106	101
1922.....	12,658,834	26,667,942	14,009,108	61	123
1923.....	12,744,034	30,519,551	17,775,517	61	141
1924.....	18,256,973	40,985,285	22,728,312	88	189
1925.....	23,556,595	46,680,157	23,123,562	113	215
1926.....	26,411,652	45,298,647	18,886,995	127	209
1927.....	24,595,023	41,242,101	16,647,078	118	190
1928.....	26,059,714	44,509,424	18,449,710	125	205
1929.....	28,151,803	40,408,281	12,256,478	135	186
1930.....	14,640,369	26,849,227	12,208,858	70	124
1931.....	7,962,046	21,788,367	13,806,321	38	100
1932.....	7,148,803	16,843,687	9,694,884	34	78
1933.....	6,928,164	16,785,121	9,856,957	33	77
1934.....	7,100,368	13,875,230	6,777,862	34	64
1935.....	7,563,825	13,120,375	5,556,550	36	60
1936.....	8,294,114	15,333,678	7,039,564	40	71
1937.....	11,453,284	15,569,777	4,116,493	55	72



## BRAZILIAN TRADE WITH SOUTH AMERICA

Importation and exportation during the 1918-1937 period

YEARS	VALUE (In pounds sterling)			INDEX NUMBERS	
	Brazilian imports	Brazilian exports	Difference	Imports	Exports
1918.....	12,316,162	15,941,085	3,624,923	100	100
1919.....	13,863,216	11,909,570	1,953,646	113	75
1920.....	12,294,560	12,339,222	44,662	100	77
1921.....	7,747,480	7,311,569	435,911	63	46
1922.....	7,512,543	7,469,904	42,639	61	47
1923.....	6,529,676	6,674,544	144,868	53	42
1924.....	9,488,491	8,198,990	1,289,501	77	51
1925.....	10,797,837	8,550,153	2,247,684	88	54
1926.....	8,783,351	9,079,344	295,993	71	57
1927.....	10,961,516	8,196,357	2,765,159	89	51
1928.....	12,386,536	8,887,979	3,498,557	101	56
1929.....	11,403,793	9,431,643	1,972,150	93	59
1930.....	9,440,990	8,170,670	1,270,320	77	51
1931.....	5,585,324	5,019,247	566,077	45	31
1932.....	2,654,066	3,717,654	1,033,588	22	23
1933.....	4,373,235	3,138,588	1,234,647	36	20
1934.....	3,679,140	2,871,079	808,061	30	18
1935.....	3,989,638	2,617,958	1,371,680	32	16
1936.....	5,496,517	2,498,407	2,998,110	45	16
1937.....	6,135,401	2,972,633	3,162,768	50	19



## BRAZILIAN TRADE WITH OCEANIA

Importation and exportation during the 1919-1937 period

YEARS	VALUE (in pounds sterling)			INDEX NUMBERS	
	Brazilian imports	Brazilian exports	Difference	Imports	Exports
1919.....	138,912	—	138,912	728	—
1920.....	15,122	—	15,122	79	—
1921.....	8,335	—	8,335	44	—
1922.....	19,863	—	19,863	104	—
1923.....	15,528	—	15,528	81	—
1924.....	19,082	20	19,062	100	100
1925.....	32,433	1,392	31,041	179	696
1926.....	7,422	2,472	4,950	39	1,236
1927.....	9,632	1,551	8,081	50	776
1928.....	15,914	1,503	14,411	83	751
1929.....	15,410	5,744	9,666	81	2,872
1930.....	6,025	5,616	409	32	2,808
1931.....	7,683	4,964	2,719	40	2,482
1932.....	28	1,076	1,048	2	538
1933.....	26,658	3,202	23,456	140	1,601
1934.....	7,536	4,595	2,941	39	2,298
1935.....	12,653	8,723	3,930	66	4,362
1936.....	7,868	19,845	11,977	41	9,923
1937.....	14,449	31,403	16,954	76	15,702



BRAZILIAN TRADE WITH ARGENTINA

Importation and exportation during the 1918-1937 period

YEARS	VALUE (In pounds sterling)			INDEX NUMBERS	
	Brazilian imports	Brazilian exports	Difference	Imports	Exports
1918.....	10,020,245	9,296,626	723,619	100	100
1919.....	12,032,250	5,836,881	6,195,369	120	63
1920.....	10,544,889	7,093,995	3,450,894	105	76
1921.....	6,902,798	3,847,852	3,054,946	69	41
1922.....	6,737,686	4,694,198	2,043,488	67	50
1923.....	6,196,424	3,942,986	2,253,438	62	42
1924.....	8,296,620	5,122,432	3,174,188	83	55
1925.....	9,837,258	5,572,465	4,264,793	98	60
1926.....	7,935,371	5,921,647	2,013,724	79	64
1927.....	9,479,682	5,339,946	4,139,736	95	57
1928.....	10,461,429	5,783,530	4,677,899	104	62
1929.....	9,479,458	6,023,656	3,455,802	95	65
1930.....	7,177,113	4,487,956	2,689,157	72	48
1931.....	4,206,539	2,942,187	1,264,352	42	32
1932.....	1,605,756	2,195,024	589,268	16	24
1933.....	3,567,121	1,854,597	1,712,524	36	20
1934.....	3,157,810	1,670,495	1,487,315	31	18
1935.....	3,534,474	1,618,691	1,915,783	35	18
1936.....	4,941,371	1,586,575	3,354,796	49	17
1937.....	5,675,012	1,997,792	3,677,220	57	21





## Importation and exportation by commodity in 1937

MERCHANDISE	QUANTITY (kilos)	VALUE (milrêls)	MERCHANDISE	QUANTITY (kilos)	VALUE (milrêls)
Brazilian imports from Argentina					
Wheat.....	909,629,000	650,719,531	Lanigerous cattle for breeding purposes.....	33,050	297,671
Wheat flour.....	31,173,000	29,450,879	Laminated tin plates.....	111,741	248,264
Flax seed for industrial purposes.....	17,034,377	14,310,073	Seeds for planting.....	240,767	243,483
Pears.....	2,788,893	5,109,932	Bagage and objects of personal use.....	20,753	231,130
Vegetable extracts for tanning purposes.....	2,962,494	3,712,650	Frozen meats.....	55,658	226,283
Tin in bulk.....	135,089	2,707,001	Artificial or vegetable silk thread for weaving purposes.....	6,099	184,163
Apples.....	1,085,100	2,302,179	Preserved vegetables and extracts.....	90,000	174,734
Petroleum.....	4,317,900	1,955,179	Ploughs.....	46,483	153,831
Portable store-houses for large industrial establishments.....	899,122	1,800,758	Agricultural tractors and spare parts.....	13,488	144,653
Straw for brooms.....	1,497,732	1,285,214	Unspecified motors.....	17,105	143,877
Skins and hides (salted) and leathers.....	119,130	1,281,272	Acetate of cellulose.....	20,000	122,774
Wool waste.....	269,888	1,234,443	Common table wine.....	32,261	107,512
Fresh peaches.....	453,499	1,200,028	Accessories for radio apparatus.....	1,429	107,155
Dried fruits.....	289,217	1,041,167	Bird seed.....	96,139	99,863
Gasoline.....	1,789,000	872,866	Vaccines and serums in containers and tubes.....	439	99,047
Wool in bulk, carded, etc.....	78,076	694,588	Dressed skins and hides.....	1,489	97,667
Fresh fruits.....	297,710	624,294	Internal combustion motors.....	3,546	96,693
Machines and accessories for unspecified industries.....	49,251	573,116	Agricultural machines and accessories.....	21,692	94,556
Wickerwork.....	323,210	552,176	Stills.....	12,273	93,121
Preserved meat and extracts.....	14,537	523,866	Spare parts and glass accessories for vehicles.....	6,687	89,966
Boilers and accessories for steam engines.....	186,707	522,254	Preserved fish and extracts.....	14,277	84,272
Oats.....	708,136	497,654	Preserved milk.....	6,647	82,734
Machines and apparatus for the oil extracting and refining industries.....	36,113	492,634	Unspecified machines and accessories.....	12,867	82,291
Bovine cattle for breeding purposes.....	44,000	410,963	Scales.....	18,415	80,968
Operative machines for workshops.....	25,234	316,603	Sundry items.....	3,709,829	8,920,565
Preserved fruits and extracts..	233,510	298,458	TOTALS.....	981,037,559	736,797,051

## Brazilian exports to Argentina

Pine (wood).....	166,270,957	40,938,047	Lentils.....	461,500	334,350
Mate.....	32,370,044	29,059,050	Unspecified timber in bulk...	2,019,204	253,768
Oranges.....	46,132,058	28,012,547	Perfumes.....	18,974	251,615
Bananas.....	166,749,110	20,576,462	White metal goods.....	8,565	239,894
Ground coffee.....	19,775,940	54,530,554	Dextrine.....	146,100	212,940
Rice in bulk.....	30,031,964	15,902,866	Cigars and cigarettes.....	6,489	191,512
Leaf tobacco.....	5,270,419	12,325,061	Piassava fibre.....	123,780	167,956
Cocoa.....	4,106,250	8,544,408	Essences for perfumes.....	8,487	160,000
Textiles.....	330,002	4,322,219	Unspecified machines.....	27,964	152,438
Pineapples.....	4,294,488	3,028,714	Jatoba.....	23,529	141,074
Matte.....	1,591,145	1,933,563	Cotton weaving thread.....	20,055	132,389
Bauxite ore.....	8,770,055	1,864,285	Horse cloth (made from sheepskin).....	22,593	118,608
Empty bags.....	221,651	1,778,548	Paina (Brazilian vegetable down).....	36,963	112,429
Raw cotton.....	414,270	1,373,628	Tapioca.....	87,200	100,367
Cotton sewing thread.....	83,737	1,326,626	Unspecified potter's earth and clay.....	475,902	90,240
Cedar (wood).....	3,277,109	1,255,228	Sheepskins.....	11,408	87,084
Manioc flour.....	2,141,750	1,085,912	Nuts.....	95,400	76,961
Broom handles.....	3,911,326	1,022,530	Horse hair.....	7,412	73,891
Ipê (wood).....	6,224,182	999,263	Tangerines.....	126,160	73,040
Ground coffee.....	212,220	902,790	Cabreva (wood).....	347,720	72,115
Ox hides, salted.....	174,703	639,984	Unspecified common stones.....	215,104	67,222
Cotton — seed oil.....	323,661	535,384	Prepared wood, unspecified.....	115,052	63,373
Carnauba wax.....	38,948	430,544	Rubber combs.....	2,560	61,976
Quebracho (wood).....	2,788,532	413,837	Marble in bulk.....	83,888	52,000
Dried ox hides.....	30,422	397,138	Sundry items.....	734,376	862,380
Unspecified skins.....	31,945	362,651	TOTALS.....	511,586,466	241,762,891
Machines for industrial purposes.....	104,259	354,693			
Potatoes.....	616,940	354,289			
Medicines.....	21,994	337,448			

BRAZILIAN TRADE WITH AUSTRIA

Importation and exportation during the 1919-1937 period

YEARS	VALUE (in pounds sterling)			INDEX NUMBERS	
	Brazilian Imports	Brazilian exports	Difference	Imports	Exports
1919.....	4,646	444,963	440,317	100	100
1920.....	64,920	53,284	11,636	1,397	12
1921.....	51,120	17,075	34,045	1,100	4
1922.....	69,928	10	69,918	1,505	—
1923.....	109,348	—	109,348	2,354	—
1924.....	124,119	10,175	113,944	2,671	2
1925.....	124,934	—	124,934	2,689	—
1926.....	88,225	—	88,225	1,899	—
1927.....	68,290	—	68,290	1,470	—
1928.....	97,841	—	97,841	2,106	—
1929.....	63,285	—	63,285	1,362	—
1930.....	83,788	1	83,787	1,803	—
1931.....	8,852	424	8,428	191	—
1932.....	12,260	—	12,260	264	—
1933.....	17,961	—	17,961	387	—
1934.....	18,710	193	18,517	403	—
1935.....	14,600	—	14,600	316	—
1936.....	44,761	523	44,238	963	—
1937.....	67,786	5,820	61,966	1,459	1



## Importation and exportation by commodity in 1937

MERCHANDISE	Quantity (kilos)	Value (milrís)	MERCHANDISE	Quantity (kilos)	Value (milrís)
Brazilian imports from Austria					
Cigaretts papers.....	205,003	1,853,486	Machines and accessories for engine- ering.....	14,352	66,850
Steel bars and rods.....	177,479	770,696	Steel plates, sheets, etc.....	4,607	61,582
Hemp yarn for unspecified use.....	70,763	623,329	Unspecified combs and toilet articles	592	52,597
Electric dynamos and generators with motor.....	29,179	463,293	Plastic material and synthetic resins	4,014	51,904
Heavy tools.....	42,627	387,412	Carbon paper.....	2,733	49,468
Jute yarn for textile purposes.....	100,577	342,935	Wool yarn for weaving purposes...	1,065	47,068
Objects of personal use.....	1,269	369,294	Sewing machines.....	2,542	46,118
Manual tools and utensils for work- shops.....	26,322	278,744	Tools and utensils for machines.....	400	45,158
Felt and sarsenet in rolls and finish- ed products.....	4,406	248,275	Tools and machines for physics, ma- thematics, etc.....	389	43,357
Special steel for tools, springs, etc....	74,605	237,722	Nails, screws and rivets.....	7,086	41,933
Cinematographic films.....	513	216,901	Chlorate of potassium and sodium...	12,500	33,289
Tools, machines and accessories for chemistry.....	776	197,324	Common light lamps.....	346	32,368
Crepon, crinkled, fine, etc. paper...	17,276	122,709	Motion or transmission apparatus....	577	28,461
Cubic and laminated nickel.....	5,801	115,800	Iron and steel wire.....	10,372	27,964
Automobiles (Motor-cars).....	12,000	115,101	Woolen ready-made clothes and gar- ments.....	107	25,606
Internal combustion motors.....	3,564	108,444	Rubber goods and derivatives.....	799	23,154
Typewriters.....	1,356	102,377	Cards, etc., in sheets and rolls.....	8,564	22,496
Writing paper.....	28,946	101,716	Objects for domestic or personal use	304	22,383
Spare parts and accessories for machi- nery.....	3,152	94,428	Wood pulp for paper making.....	24,500	22,380
Copper toys and ornaments.....	337	85,780	Dried legumes and vegetables.....	600	21,878
Newsprint paper.....	8,207	82,219	Whitewash of lead.....	7,200	21,587
Cinematographic machines and ap- paratus.....	487	74,286	Cotton ready-mads clothes.....	42	21,571
Operative machines for workshops...	4,692	74,063	Vermilion and red-lead.....	7,750	20,413
			Non specified manufactured products	269	20,374
			Sundry items.....	76,383	984,550
			TOTALS.....	1,007,430	8,900,843

## Brazilian exports to Austria

Coffee.....	135,000	424,592	Unspecified skins.....	72	1,477
Raw cotton.....	46,868	194,415	Beeswax.....	150	1,380
Salted ox hides.....	26,112	81,726	Dried pig skins.....	51	700
Cocoa.....	2,053	5,812	Food preserves.....	192	499
Bons flour.....	10,200	4,126	Horse hair.....	674	7,127
Animal fertilizers.....	10,200	4,083			
Diamonds.....	s/p	3,490	TOTALS.....	231,572	729,427

## BRAZILIAN TRADE WITH BELGO-LUXEMBURG UNION

Importation and exportation during the 1918-1937 period

YEARS	VALUE (In pounds sterling)			INDEX NUMBERS	
	Brazilian Imports	Brazilian exports	Difference	Imports	Exports
1918.....	—	323,434	323,434	—	7
1919.....	110,132	4,740,757	4,630,625	100	100
1920.....	2,207,116	2,884,406	677,290	2,004	61
1921.....	2,455,900	1,454,815	1,001,085	2,230	31
1922.....	1,553,076	1,935,992	382,916	1,410	41
1923.....	1,913,253	1,912,695	558	1,732	40
1924.....	2,414,986	2,631,001	216,015	2,193	55
1925.....	2,835,541	2,643,409	192,132	2,575	56
1926.....	3,429,509	2,218,612	1,210,897	3,114	47
1927.....	3,260,412	2,471,536	788,876	2,960	52
1928.....	3,572,774	2,671,882	900,892	3,244	56
1929.....	3,869,457	2,649,074	1,220,383	3,513	56
1930.....	2,086,247	2,082,559	3,688	1,894	44
1931.....	954,552	1,456,974	502,422	87	31
1932.....	858,753	954,109	95,356	78	20
1933.....	1,491,742	1,007,683	484,059	1,354	21
1934.....	1,485,421	1,197,626	287,795	1,349	25
1935.....	1,586,531	1,082,237	504,294	1,441	23
1936.....	803,335	1,161,252	357,917	729	24
1937.....	1,797,810	1,341,971	455,839	1,632	28





## Importation and exportation by commodity in 1937

MERCHANDISE	QUANTITY (kilos)	VALUE (milrís)	MERCHANDISE	QUANTITY (kilos)	VALUE (milrís)
Brazilian imports from Belgo—Luxemburg Union					
Railway cars.....	13,454,000	31,947,122	Electric dynamos and generators with motors.....	131,677	1,326,595
Inter-connection pieces for railroads and street railways...	27,855,499	25,528,818	Electric appliances, i. e. irons, cafeteiras or electric coffee percolators, toasters, etc., etc.	203,561	1,310,032
Apparatus and accessories for telegraphic installations.....	261,406	20,485,733	Pneumatic tires (Rubber tires).....	100,778	1,188,459
Skins,—prepared, combed and carded.....	169,684	14,333,381	Photographic plates and films.....	35,276	1,122,736
Tubes, pipes and accessories....	15,287,562	14,289,775	Aluminium in bulk.....	174,445	1,120,760
Iron bars and rods.....	13,211,553	12,524,051	Machines and accessories for the iron and other metal industries.....	430,788	1,083,583
Window panes.....	9,730,284	8,736,263	Photographic paper.....	42,264	1,065,568
Iron and steel wire.....	6,475,368	7,863,552	Laminated or hammered copper	191,360	1,031,522
Pure linen textiles,—unspecified.....	229,932	7,805,881	Spare parts and accessories for the iron and steel industries	574,782	1,020,685
Mtuz process iron and steel....	7,356,212	6,940,618	Articles to be used in the make-up of manufactured goods....	15,971	1,009,099
Iron plates and sheets.....	5,112,524	6,216,101	Rifles, revolvers, and other firearms.....	16,160	942,419
Locomotives.....	490,000	5,968,303	Spinning and weaving machines	158,917	869,441
Barbed wire.....	3,542,919	4,781,140	Plain plate glass.....	168,659	843,361
Lead in bulk.....	1,349,700	2,932,291	Mixed component textiles, containing linen.....	36,365	821,292
Jute yarn for weaving purposes	1,031,286	2,825,020	Cars and other vehicles for agricultural and industrial establishments and mines...	422,082	782,488
Smooth galvanized iron plates...	1,566,057	2,444,427	Tin in bulk.....	38,973	775,386
Spare parts and accessories for building purposes.....	2,140,782	2,393,337	Zinc plates.....	337,134	736,016
Axles, wheels and spare parts for railroad and street railway rolling stock.....	759,993	2,356,653	Zinc in bulk.....	336,113	698,228
Zinc and titanium white ceruse	1,049,682	2,029,342	Sulphate of aluminium.....	1,867,657	689,873
Super-phosphate of calcium....	6,986,739	1,725,075	Nails, screws and rivets.....	391,441	645,621
Woolen yarn for weaving purposes.....	42,143	1,704,349	Mixed linen and cotton textiles	24,345	553,605
Operative machines for workshops.....	368,908	1,586,132	Pita (aloe).....	113,175	557,551
Leaf tobacco.....	187,455	1,568,168	Whits arsenic.....	284,240	541,891
Iron in hoops and strips.....	1,283,973	1,519,328	Sundry items.....	9,270,838	16,672,385
Electric cables.....	147,100	1,501,330	TOTALS.....	137,121,422	233,586,023
Sulphates of copper.....	835,000	1,445,112			
Corrugated iron and steel plates.	784,109	1,358,543			
Wool in bulk, carded, etc.....	44,251	1,332,082			

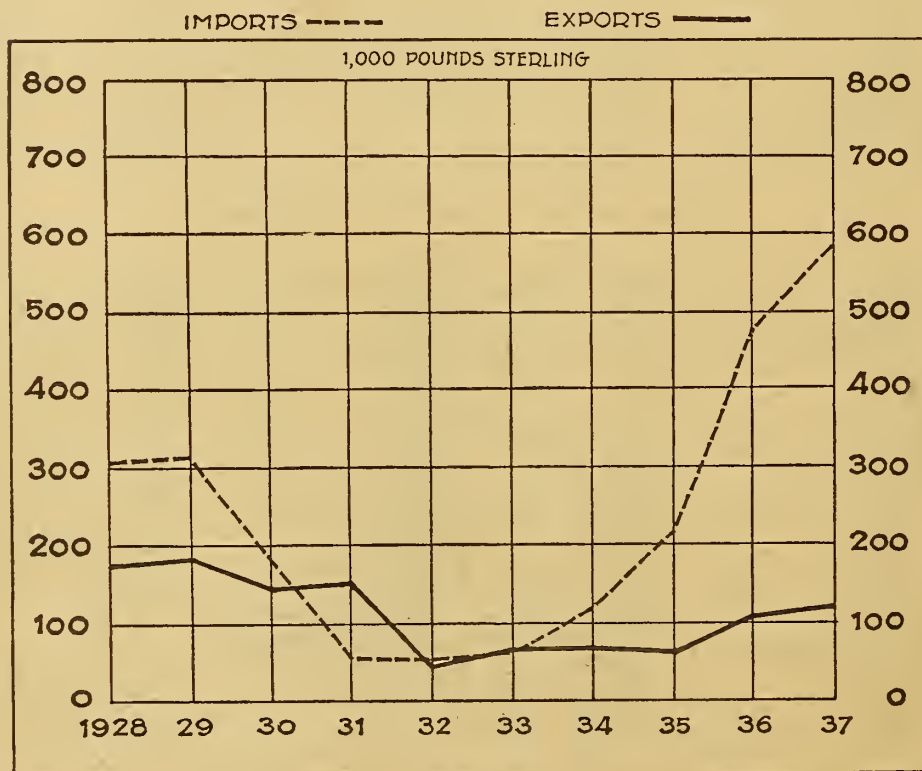
## Brazilian exports to Belgo—Luxemburg Union

Coffee.....	14,251,320	43,967,033	Cotton—seed oil.....	329,404	439,463
Raw cotton.....	6,116,622	25,668,008	Babassú nut bran.....	1,252,715	401,512
Castor beans.....	22,988,782	17,326,596	Beeswax.....	30,470	353,317
Salted ox hides.....	2,184,435	7,704,665	Bones.....	542,698	252,204
Oranges.....	11,050,732	6,968,713	Grape Fruit.....	424,212	245,823
Cotton—seed cakes.....	14,883,882	6,430,937	Meat extract.....	24,200	220,966
Diamonds.....	8	5,596,687	Tallow.....	146,008	214,297
Manganese.....	28,382,000	5,477,151	Lead ore.....	341,450	210,052
Wheat bran.....	16,116,552	4,483,740	Rice bran.....	804,058	187,246
Linseed cakes.....	8,575,937	4,048,927	Wheat flour.....	200,000	185,974
Frozen meat.....	2,480,006	3,605,037	Carnarinaha.....	315,911	183,336
Dried ox hides.....	595,507	3,066,540	Linters.....	104,139	181,921
Maize.....	5,810,680	2,351,715	Cotton—seed.....	587,043	173,468
Leaf tobacco.....	1,038,613	2,250,926	Horns.....	104,974	170,078
Animal fertilizers.....	3,726,963	1,958,820	Cigars and cigarettes.....	9,913	169,985
Cocoa.....	743,640	1,933,277	Tinplate filings.....	755,298	164,141
Wool in bulk.....	163,815	1,324,083	Ceruss.....	305,800	162,088
Leather.....	125,750	1,273,463	Manissoba rubber.....	40,746	155,900
Carnauba wax.....	110,190	1,233,528	Glandules.....	35,245	150,769
Cotton—seed bran.....	2,527,680	1,198,074	Tangerines.....	245,024	141,856
Piassava.....	603,676	1,057,374	"Seringa" rubber from the States of Amazonas, Pará, the North of Mato Grosso and the Acre Territory.....	26,750	136,205
Pine (wood).....	4,201,676	1,034,228	Frozen tongues.....	40,978	135,180
Dried and salted tripes.....	483,683	971,153	Sundry items.....	6,273,049	1,646,695
Horse hair.....	95,428	394,963	TOTALS.....	163,382,284	160,694,400
Cotton residues.....	348,617	774,081			
Grease.....	363,335	669,757			
Babassú nut cakes.....	1,659,110	608,203			
Lentils.....	813,560	534,240			

## BRAZILIAN TRADE WITH CANADA

Importation and exportation during the 1918-1937 period

YEARS	VALUE (in pounds sterling)			INDEX NUMBERS	
	Brazilian Imports	Brazilian exports	Difference	Imports	Exports
1918.....	222,922	184,857	38,065	100	100
1919.....	253,487	22,002	231,485	114	12
1920.....	704,612	118,860	585,752	316	64
1921.....	569,629	70,788	498,841	255	38
1922.....	336,661	83,404	253,257	151	45
1923.....	431,191	74,543	356,648	193	40
1924.....	577,373	121,716	455,657	259	66
1925.....	1,119,589	130,627	988,962	502	71
1926.....	1,481,535	150,157	1,331,378	665	81
1927.....	100,956	128,823	27,867	45	70
1928.....	306,661	173,610	133,051	138	94
1929.....	314,450	180,208	134,242	141	97
1930.....	181,982	147,241	34,741	82	80
1931.....	55,269	152,959	97,690	25	83
1932.....	54,808	49,894	4,914	25	27
1933.....	64,445	65,960	1,515	29	36
1934.....	120,659	68,139	52,520	54	37
1935.....	218,638	63,823	154,815	98	34
1936.....	479,307	106,026	373,281	215	57
1937.....	584,214	122,898	461,316	262	66



## Importation and exportation by commodity in 1937

MERCHANDISE	Quantity (kilos)	Value (millrêls)	MERCHANDISE	Quantity (kilos)	Value (millrêls)
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## Brazilian imports from Canada

Sewing machines.....	2,178,295	33,791,264	Tubes and pipes.....	4,764	72,251
Rubber tires.....	1,294,780	12,755,669	Electrical transformers.....	1,014	64,446
Lead in bulk.....	3,521,804	7,581,083	Mineral inflammable products.....	5,080	54,322
Newsprint paper.....	7,298,017	6,552,923	Copper in bulk.....	10,164	54,145
Zinc in bulk.....	523,548	2,515,121	Accessories for automobiles.....	4,557	47,187
Cod.....	722,970	1,707,971	Silk thread for weaving purposes..	326	46,242
Cotton and rubber goods.....	93,291	1,301,998	Sound apparatus.....	1,966	44,574
Wood pulp for paper making.....	739,707	951,133	Goods and accessories for installations	4,477	42,936
Inner tubes.....	84,031	911,191	Amianthus and asbestos in finished products.....	855	42,422
Toasted barley or malt.....	574,960	843,146	Iron in bulk or smelted.....	25,402	41,237
Tubes, pipes and accessories.....	92,995	475,214	Electric ventilators, aspirators and drying apparatus.....	1,556	36,028
Wheat flour.....	591,000	468,227	Steel plates, sheets, etc.....	577	33,868
Electrical measuring apparatus.....	16,085	418,752	Motion or transmission apparatus..	4,898	33,330
Electric cables.....	33,816	367,466	Leather straps, strips, etc., for workshops.....	347	31,940
China or glass insulators.....	54,831	357,206	Whisky.....	1,719	31,208
Aluminium in bulk.....	48,492	335,778	Iron and steel products.....	4,007	27,140
Apples.....	86,184	225,254	Manual tools and utensils for workshops.....	272	26,527
Operative machines and electric apparatus.....	22,103	208,004	Portable storehouses for vast industrial installations.....	3,884	26,321
Rubber tubes.....	19,085	200,486	Galvanized iron goods.....	4,286	25,713
Spare parts and accessories for electric installations.....	6,159	142,648	Iron and steel goods for electric light installations.....	2,451	23,780
Ploughs.....	37,311	132,719	Electrical goods.....	631	22,195
Insulated copper wire for electric installations.....	2,406	118,360	Cutlery.....	181	21,395
Electric elevators and accessories....	9,078	87,469	Objects of personal use.....	79	13,395
Industrial machinery and accessories..	4,750	86,502	Sundry items.....	259,895	2,846,853
Unspecified machines, apparatus and utensils.....	27,724	84,180			
Rubber goods and similar products for machinery.....	4,196	78,078	TOTALS.....	18,431,006	76,407,297

## Brazilian exports to Canada

Coffee.....	2,228,760	6,983,980	Cotton linters.....	77,223	137,428
Oranges.....	2,516,530	2,252,825	Brazil nuts.....	25,500	99,242
Iron ore.....	42,398,000	1,764,168	Cotton residues.....	25,081	51,522
Shelled Brazil nuts.....	140,610	1,363,302	Timbó (powder).....	5,250	38,861
Cocoa.....	240,000	700,750	Aguano (wood).....	56,824	26,025
Carnaíba wax.....	44,814	513,898	Unspecified skins.....	46	2,426
Coconut butter.....	104,429	475,037			
Grape Fruit.....	276,400	164,120	TOTALS.....	48,139,467	14,573,584

## BRAZILIAN TRADE WITH CHILE

Importation and exportation during the 1918-1937 period

YEARS	VALUE (In pounds sterling)			INDEX NUMBERS	
	Brazilian Imports	Brazilian exports	Difference	Imports	Exports
1918.....	76,145	186,648	110,503	100	100
1919.....	54,266	337,127	282,861	71	181
1920.....	29,101	457,027	427,926	38	246
1921.....	8,300	104,938	96,638	11	56
1922.....	22,941	281,845	258,904	30	151
1923.....	22,152	250,782	228,630	29	134
1924.....	44,232	322,213	277,981	58	173
1925.....	95,784	511,419	415,635	126	274
1926.....	14,537	393,469	378,932	190	211
1927.....	41,647	326,678	285,031	55	175
1928.....	59,069	494,073	435,034	77	265
1929.....	55,089	436,531	381,442	72	234
1930.....	84,080	298,330	214,250	63	160
1931.....	28,484	178,363	149,879	37	96
1932.....	38,275	174,061	135,786	50	93
1933.....	57,915	97,230	39,315	76	52
1934.....	106,904	97,650	9,254	140	52
1935.....	90,545	107,159	16,614	119	57
1936.....	79,574	97,498	17,924	104	52
1937.....	139,222	122,482	16,740	163	66





## Importation and exportation by commodity in 1937

MERCHANDISE	Quantity (kilos)	Value (milréis)	MERCHANDISE	Quantity (kilos)	Value (milréis)
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## Brazilian imports from Chile

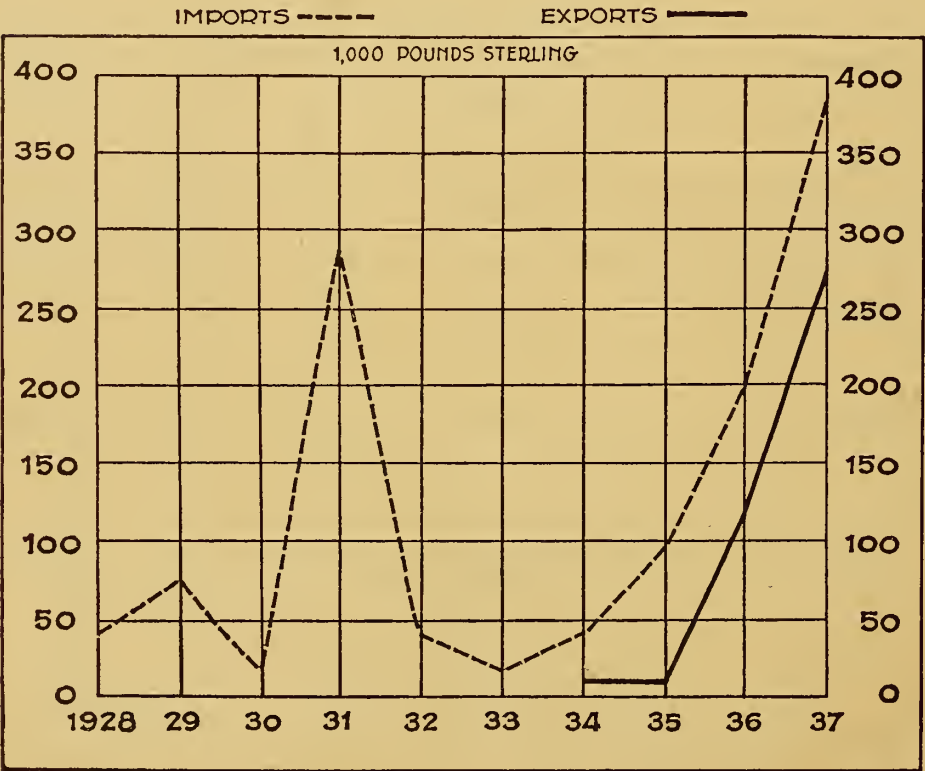
Raw salpetre.....	9,599,700	5,064,676	Pears.....	81,354	132,713
Copper in bulk.....	622,389	2,770,385	Purified, refined or pure brimstone	300,000	131,322
Garlic.....	1,366,133	1,861,000	Ground or triturated brimstone..	107,904	68,741
Lupines.....	585,998	1,010,613	Sulphuret of sodium.....	95,679	62,325
Apples.....	602,009	893,462	Beans.....	29,716	44,920
Toasted barley or malt.....	863,900	755,911	Unspecified cereals, flours, grain,		
Peas.....	348,083	451,876	etc.....	30,007	44,848
Hemp in bulk.....	128,411	388,842	Common table wine.....	12,622	42,168
Grapes.....	181,990	304,699	Hemp tow.....	9,928	22,144
Iodine.....	8,000	224,599	Olives.....	6,728	19,713
Sulphate of sodium.....	918,500	193,849	Oats (ground).....	21,455	14,307
Oats.....	259,198	147,690	Bird seed.....	6,900	13,835
Nuts.....	46,650	147,647	Sulphate of aluminium.....	30,130	10,405
Hemp fibre for unspecified use.....	40,569	140,184	Sundry items.....	7,326,268	3,158,174
Chemical and synthetic fertilizers.....	393,406	135,641	TOTALS.....	24,023,627	18,256,689

## Brazilian exports to Chile

Mate ("ecorched").....	8,729,531	9,580,332	Castor beans.....	22,160	22,554
Coffee.....	1,652,760	4,244,264	Carnaúba wax.....	2,040	20,400
Cotton textiles.....	24,018	364,615	Wooden manufactured goods.....	2,070	9,036
Cocoa.....	78,000	248,742	Unspecified beverages.....	406	1,000
Cotton sewing thread.....	13,333	233,937	Medicines.....	176	600
Mate ("improved").....	89,920	94,416	Phonograph records.....	18	500
Oranges.....	72,000	43,600	TOTALS.....	10,686,432	14,863,996

BRAZILIAN TRADE WITH CZECHO-SLOVAKIA  
Importation and exportation during the 1920—1937 period

YEARS	VALUE (In pounds sterling)			INDEX NUMBERS	
	Brazilian Imports	Brazilian exports	Difference	Imports	Exports
1920.....	125,753	—	125,753	298	—
1921.....	113,720	—	113,720	267	—
1922.....	121,830	—	121,830	286	—
1923.....	126,421	—	126,421	297	—
1924.....	178,294	—	178,294	419	—
1925.....	270,771	—	270,771	636	—
1926.....	142,683	—	142,683	336	—
1927.....	34,879	—	34,879	82	—
1928.....	43,887	—	43,887	103	—
1929.....	75,446	—	75,446	177	—
1930.....	19,958	—	19,958	47	—
1931.....	286,588	—	286,588	674	—
1932.....	42,685	—	42,685	100	—
1933.....	18,004	—	18,004	42	—
1934.....	42,515	10,470	32,045	100	100
1935.....	91,770	10,281	81,489	216	98
1936.....	197,585	116,220	81,365	465	1,110
1937.....	383,113	271,688	111,525	901	2,594



## Importation and exportation by commodity in 1937

MERCHANDISE	QUANTITY (kilos)	VALUE (milréis)	MERCHANDISE	QUANTITY (kilos)	VALUE (milréis)
Brazilian imports from Czecho-Slovakia					
Machines and accessories for the sugar industry.....	2,019,813	10,204,772	Barley.....	150,000	231,423
Wood pulp for paper making....	5,531,807	5,426,057	Objects of personal use.....	1,807	230,980
Toasted barley of malt.....	3,033,382	5,174,357	Manufactured goods of rubber mixed with wool or silk....	3,023	213,843
War material.....	54,500	3,043,785	Tapestry.....	8,240	208,993
Portable storehouses for large industrial installations.....	1,052,561	1,948,224	Pneumatic tires.....	20,212	208,510
Hops for breweries.....	105,759	1,552,136	Glass or chinaware articles for smokers or for lighting purposes.....	9,387	208,390
Glass articles for mounting factory products.....	40,233	1,396,948	Crepon and other crinkled paper	35,758	205,171
Glass tableware.....	89,246	1,323,394	Various woollen textiles.....	2,175	189,958
Copper fancy goods and alloys for the manufacture of same	6,576	934,508	Articles and accessories for manufacturing purposes.....	4,252	187,652
Window panes.....	782,886	912,696	Footwear heels and soles.....	9,978	185,085
Tubes, pipes and accessories....	369,324	896,949	Oats.....	109,000	174,540
Nails.....	318,528	875,240	Objects of personal use,—unspecified.....	1,400	172,650
Bed clothes and linen in general	17,691	651,131	Spare parts and accessories for the sugar industry.....	68,078	161,628
Household apparatus and utensils.....	121,580	622,142	Citric acid.....	22,750	153,811
Unspecified goods of enamelled iron.....	47,581	616,353	Copper wire netting.....	4,317	141,521
China tableware.....	47,843	577,563	Glassware,—unspecified.....	5,182	135,636
Fancy objects of glass for ornamental purposes.....	18,059	524,421	Linen thread for sewing purposes.....	7,354	122,387
Linen thread for weaving purposes.....	39,737	515,947	Refractory bricks.....	201,939	120,097
Dyed or colored textiles.....	5,888	474,657	Flasks, pots, glass bottles....	4,651	107,235
Trucks (lorries).....	58,000	368,677	Printed books.....	2,959	106,647
Products of non-specified abrasive minerals.....	33,671	335,358	News print paper.....	76,498	106,413
Radio apparatus.....	6,918	315,387	Leather belting, including some transmission belts, packing and hose, etc.....	5,502	101,235
Purl glass beads and braidwork	2,653	312,071	Animal tallow and grease....	88,620	88,808
Woollen thread for weaving purposes.....	7,241	307,565	Ploughs.....	26,014	80,085
Aluminium in bulk.....	37,500	290,981	Sundry items.....	444,017	6,795,703
Velvets, furs and similar goods..	5,174	265,727	TOTALS.....	15,167,264	50,540,442

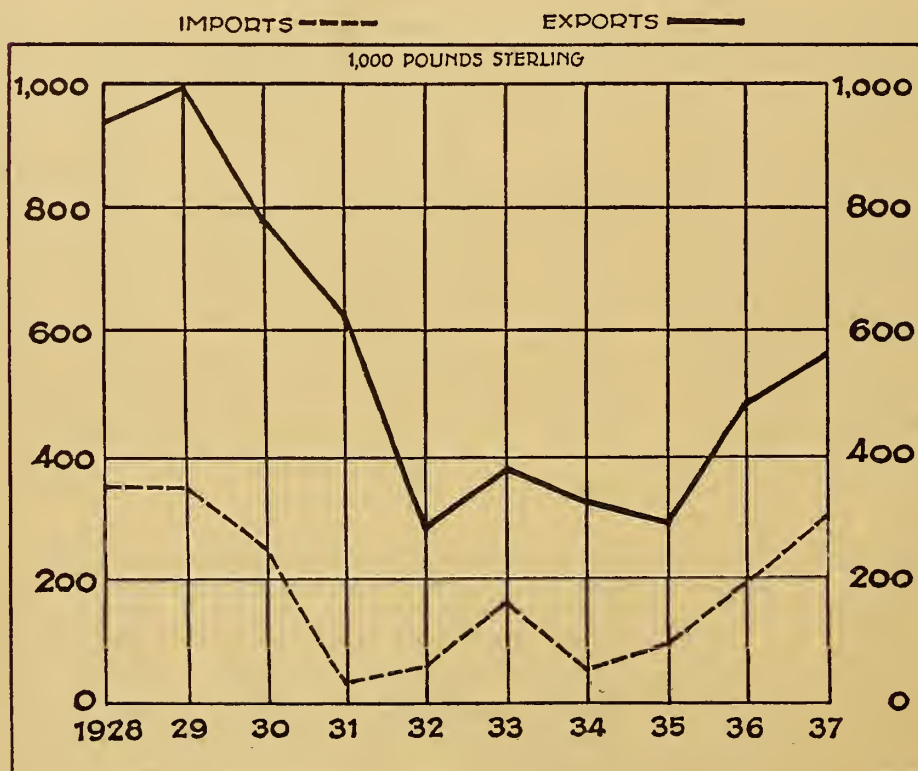
## Brazilian exports to Czecho-Slovakia

Salted cow hides.....	6,449,137	16,961,061	"Seringa" rubber from the States of Amazonas, Pará, the North of Mato Grosso and the Acre Territory.....	19,000	60,111
Coffee.....	3,110,700	9,382,071	Unspecified skins.....	2,048	29,879
Manganese.....	11,389,000	2,519,045	Mica.....	2,090	18,347
Dried ox hides.....	644,115	2,117,428	Claws or nails.....	14,643	6,091
Raw cotton.....	201,086	862,282	Precious stones,—unspecified..	3	809
Dried and salted tripes.....	27,342	223,167	TOTALS.....	22,031,241	32,470,431
Cocoa.....	76,500	164,755			
Tallow.....	95,577	125,385			

## BRAZILIAN TRADE WITH DENMARK

Importation and exportation during the 1918—1937 period

YEARS	VALUE (in pounds sterling)			INDEX NUMBERS	
	Brazilian imports	Brazilian exports	Difference	Imports	Exports
1918.....	41,464	99,546	58,082	100	100
1919.....	28,387	2,386,736	2,358,349	68	2,398
1920.....	128,223	894,919	766,696	309	899
1921.....	140,055	448,989	308,934	338	451
1922.....	284,700	647,022	362,322	387	650
1923.....	228,615	883,164	654,549	551	888
1924.....	321,852	1,036,217	714,365	776	1,041
1925.....	257,508	949,097	691,589	621	953
1926.....	287,895	1,080,540	792,645	694	1,085
1927.....	292,344	789,273	496,929	705	793
1928.....	354,128	939,595	585,467	854	944
1929.....	350,842	998,455	647,613	846	1,003
1930.....	257,615	780,688	523,073	621	784
1931.....	37,124	624,695	587,571	89	627
1932.....	60,078	284,077	223,999	145	285
1933.....	158,060	384,650	226,590	381	386
1934.....	57,210	329,013	271,803	138	330
1935.....	99,112	295,394	196,282	239	297
1936.....	194,890	485,994	291,104	470	488
1937.....	308,881	557,476	248,595	745	560





## Importation and exportation by commodity in 1937

MERCHANDISE	QUANTITY (kilos)	VALUE (milréis)	MERCHANDISE	QUANTITY (kilos)	VALUE (milréis)
Brazilian imports from Denmark					
War material.....	188,336	26,954,426	Dynamos and electric genera- tors with motors.....	3,020	44,390
Machines and accessories for in- dustrial purposes.....	272,931	2,960,523	Cash registers and other similar machines.....	1,887	42,015
Machines for cement manufac- ture.....	519,642	2,514,265	White cement.....	112,000	41,079
Toasted barley for beer making	1,271,450	1,924,680	Cheese.....	3,721	40,126
Internal combustion motors, etc.	72,968	1,012,213	Terebinth and essence of tur- pentine.....	15,167	38,990
Aluminum, casein, etc.....	36,162	509,640	Motorcycles and accessories..	1,218	35,729
Printers ink.....	67,369	461,499	Electrical goods, (i. e., irons, to- asters, cafeteiras or electric coffee percolators, kettles, etc.).....	4,859	33,720
Refrigeration or heating appa- ratus.....	67,238	429,240	Tools and utensils for various machines.....	431	33,289
Apparatus and accessories for telegraphic systems.....	747	295,682	Material and spare parts for various installations.....	928	32,183
Pumps and air compressors....	25,005	287,457	Machines and accessories for engineering purposes.....	5,990	32,078
Cod.....	96,222	247,690	Unspecified mills.....	720	31,772
Medicinal injections.....	179	245,129	Tubes, pipes and accessories..	7,332	29,725
Machines for workshops.....	10,817	185,273	Oats.....	16,100	28,637
Medicinal drugs.....	5,145	172,787	Liquors and syrups.....	1,076	27,108
Insulated copper wire for electric light installations.....	3,816	146,919	Special alloys for metals in ge- neral use.....	12,156	25,376
Stones, clay and non-metallic minerals.....	299,870	115,481	Copper spare parts and acces- sories for various installations	6,865	23,723
Refractory bricks.....	262,010	111,548	Cranes.....	3,030	21,290
Electric motors and accessories	6,636	100,118	Unspecified motors.....	855	20,913
Apparatus and accessories for technical use.....	5,860	92,832	Machines and accessories for the mining industry.....	20,285	18,792
Electric refrigerators.....	5,523	68,254	Almanaks, newspapers, etc.....	1,255	17,325
Empty drums.....	9,786	67,761	Printing machines and acces- sories.....	856	14,079
Aluminum compressors for refri- geration machines.....	5,647	67,523	Objects for installations.....	628	13,901
Accumulators, batteries, dry bat- teries and other electrical equipment.....	14,889	66,719	Preserved fish and extracts, shell — fish, etc.....	1,152	12,876
Operative machines for tech- nical use.....	4,206	64,449	Sundry items.....	88,043	700,564
Spare parts and accessories for mining machines.....	40,000	55,560	TOTALS.....	3,640,948	40,618,679
Lead in bulk.....	20,100	53,222			
Animal tallow and grease.....	18,820	48,109			

## Brazilian exports to Denmark

Cotton—seed cakes.....	102,714,167	38,730,551	Cotton—seed bran.....	175,000	60,000
Coffee.....	8,622,300	25,319,564	Oiticica oil.....	10,657	37,798
Cocoa.....	1,276,140	2,795,749	Leaf tobacco.....	11,258	28,145
Piassava.....	160,790	296,212	Preserved meat.....	16,162	26,320
Coconut butter.....	35,220	250,179	Murumurú bran.....	86,040	17,208
Cotton residues.....	59,218	134,852	Unspecified seeds.....	30,000	51,020
Carnaúba wax.....	11,783	114,169	Babassú bran.....	17,160	3,432
Preserved pork.....	31,300	110,001	Unspecified skins.....	9	200
Raw cotton.....	26,542	104,633			
Cigars and cigarettes.....	4,027	82,308	TOTALS.....	113,287,773	68,162,341

BRAZILIAN TRADE WITH FINLAND

Importation and exportation during the 1919-1937 period

YEARS	VALUE (in pounds sterling)			INDEX NUMBERS	
	Brazilian Imports	Brazilian exports	Difference	Imports	Exports
1919 .....	73,739	407,116	333,377	100	100
1920 .....	632,102	98,693	533,409	857	24
1921 .....	403,636	316,403	87,233	547	78
1922 .....	172,840	518,334	345,494	234	127
1923 .....	205,647	313,033	107,386	279	77
1924 .....	219,836	364,207	144,371	298	89
1925 .....	291,563	508,849	217,281	395	125
1926 .....	250,592	544,115	293,523	340	134
1927 .....	147,327	284,653	137,326	200	70
1928 .....	339,821	342,500	2,679	461	84
1929 .....	305,660	340,328	34,668	414	84
1930 .....	264,574	194,442	70,132	359	43
1931 .....	198,790	104,835	93,955	269	26
1932 .....	201,157	250,329	49,172	273	61
1933 .....	201,711	233,159	31,448	273	69
1934 .....	135,682	320,260	184,578	184	79
1935 .....	174,942	209,436	34,494	237	51
1936 .....	136,476	256,997	120,521	185	63
1937 .....	153,633	320,069	166,436	208	79



## Importation and exportation by commodity in 1937

MERCHANDISE	Quantity (kilos)	Value (milréis)	MERCHANDISE	Quantity (kilos)	Value (milréis)
Brazilian imports from Finland					
Newsprint paper.....	16,544,199	11,612,797	Industrial machinery and accessories	746	11,926
Wood pulp for paper making.....	7,360,177	6,757,463	Cardboard, etc., in rolls or sheets..	10,000	11,061
Cigarette paper.....	132,782	864,459	Paper for various purposes.....	3,447	10,937
Wooden pulleys.....	116,944	689,955	Porcelain sanitary ware.....	2,571	10,684
Spareparts for spinning and weaving machines.....	9,116	60,627	Wood of various kinds, in bulk and sawed.....	409	8,440
Porcelain tableware.....	3,885	30,432	Apparatus, etc. for telegraphic in- stallations.....	799	5,716
Material, spareparts and accessories for various installations.....	21,763	28,247	Sundry items.....	95,134	147,598
Operative machines for workshops...	1,774	21,843			
Accessories for spinning machines....	1,896	13,377	TOTALS.....	24,305,642	20,285,562
Brazilian exports to Finland					
Coffee.....	13,497,960	36,619,204	Cotton linters.....	5,000	8,485
Raw cotton.....	304,563	1,271,168	Pickled meat.....	3,164	6,328
Salted meat.....	152,131	508,398	Unspecified wood in bulk.....	17,000	3,400
Oranges.....	242,204	156,450	Bacon.....	1,492	3,282
Dried and salted tripes.....	100,762	229,104	Prepared wood, — unspecified....	2,800	3,000
Peroba (wood).....	269,726	143,142	Jacarandá (wood).....	3,300	2,522
Cotton seed cakes.....	250,000	92,035	Cedar.....	2,360	1,939
Dried cow hides.....	14,034	78,638	Mate ("improved").....	1,199	1,200
Preserved pork.....	21,200	52,247			
Cotton waste.....	16,494	48,314	TOTALS.....	14,905,389	39,228,856

## BRAZILIAN TRADE WITH FRANCE

Importation and exportation during the 1918-1937 period

YEARS	VALUE (in pounds sterling)			INDEX NUMBERS	
	Brazilian Imports	Brazilian exports	Difference	Imports	Exports
1918.....	2,518,993	5,564,065	3,045,072	100	100
1919.....	2,967,405	27,267,743	24,300,338	118	490
1920.....	6,847,672	12,850,008	6,002,336	272	231
1921.....	3,775,263	5,797,604	2,022,341	150	104
1922.....	2,895,658	7,571,592	4,675,934	115	136
1923.....	3,262,288	9,084,397	5,822,109	129	163
1924.....	4,616,350	11,545,453	6,929,103	183	207
1925.....	4,903,778	12,946,600	8,042,822	195	233
1926.....	5,053,956	8,315,463	3,261,507	201	149
1927.....	5,036,366	8,528,897	3,492,531	195	153
1928.....	5,755,754	8,931,924	3,176,170	228	160
1929.....	4,601,698	10,549,093	5,947,395	183	189
1930.....	2,691,325	6,047,791	3,356,466	107	109
1931.....	1,344,622	4,588,501	3,243,879	53	82
1932.....	1,103,620	3,268,270	2,164,650	44	59
1933.....	1,435,186	3,265,909	1,830,723	57	59
1934.....	923,683	2,484,973	1,561,290	37	45
1935.....	935,308	2,672,808	1,737,500	37	48
1936.....	883,167	2,880,105	1,996,938	35	58
1937.....	959,753	2,702,585	1,742,832	38	48





## Importation and exportation by commodity in 1937

MERCHANDISE	QUANTITY (kilos)	VALUE (milréis)	MERCHANDISE	QUANTITY (kilos)	VALUE (milréis)
Brazilian imports from France					
Acetate of cellulose.....	812,800	8,772,736	Motor cars (Automobiles)....	126,000	884,704
Prepared and carded skins.....	75,724	5,891,737	Iron bars and rods.....	874,548	852,549
Vegetable or artificial silk yarn for weaving purposes.....	255,393	5,517,256	Industrial machinery and acces- sories.....	117,912	851,488
War material.....	81,349	5,013,243	Rails and inter-connection pieces for railroads and street railway.....	930,932	810,853
Machines and accessories for the sugar industry.....	424,722	4,830,424	Various woolen textiles.....	8,986	786,324
Artificial essences.....	16,780	3,521,853	Various goods.....	8,771	770,478
Prepared drugs and medicinal specialties.....	54,178	3,452,521	Printed books.....	31,246	755,559
Cigarette paper.....	354,601	3,192,618	Suture thread, etc.....	282	689,491
Perfumes, etc.....	12,492	2,894,207	Apparatus and accessories for telegraphic installations....	1,695	681,567
Aluminium in bulk.....	391,605	2,740,793	Seeds for planting.....	60,708	661,808
Medicinal injections.....	5,149	2,663,850	Pure linen textiles.....	10,735	599,412
Spinning and weaving machines	408,890	1,971,220	Articles for manufacturing pur- poses.....	1,720	590,449
Foaming wines, including cham- pagne.....	73,300	1,893,811	Tools and utensils for work- shops.....	28,592	590,251
Cotton thread (ordinary strength 2 or 3 ply).....	19,763	1,833,468	Iron and steel wire.....	612,289	584,563
Woolen yarn for weaving pur- poses.....	41,292	1,807,297	Vaccines and serums in con- tainers or tubes.....	914	558,125
Dried fruits.....	315,353	1,793,574	Natural essences.....	4,454	550,063
Textiles.....	7,162	1,650,039	Instruments and apparatus for medical purposes.....	18,044	528,044
Capsules, pills, etc.....	5,014	1,463,546	Wool in loose thread.....	7,111	465,328
Aniline dyes.....	34,005	1,438,760	Objects for personal use.....	32,361	393,743
Spices, condiments, etc.....	484,637	1,370,759	Iron in bulk or cast iron.....	329,200	384,445
Medicinal drops.....	5,823	1,339,573	Special steels for tools, springs, axles, etc.....	16,139	358,693
Props for industrial use.....	110,030	1,233,034	Equine cattle for breeding pur- poses.....	8,100	356,166
Common table wines.....	179,746	1,105,892	Furs and chamois leathers....	1,332	341,588
Laminated or hammered copper	189,192	1,078,852	Synthetic perfumes and other perfumery products.....	3,771	327,939
Olive oil.....	122,549	1,066,980	Coal of vegetable origin.....	125,809	320,306
Medicinal apparatus and tools	22,633	1,035,367	Cotton thread for sewing pur- poses.....	3,021	314,556
Iron and steel (Iltuz process)...	1,113,932	1,018,313	Sundry items.....	3,902,729	33,213,658
Furs.....	1,498	1,004,228			
Precious stones or gems, not mounted and uncut.....	s/p	923,366			
Iron plates, sheets, etc.....	766,150	911,536			
Tubes, pipes and accessories....	576,123	904,261			
Accessories for spinning and weaving machines.....	94,993	901,977			
Machines and apparatus for laboratories.....	36,894	887,465			
			TOTALS.....	14,360,974	125,346,706
Brazilian exports to France					
Coffee.....	75,261,720	206,281,151	Unspecified skins.....	21,847	501,603
Raw cotton.....	12,709,458	48,419,902	Coconut butter.....	65,550	392,857
Frozen meat.....	6,841,443	9,240,001	Iron ore.....	6,096,000	300,000
Manganese.....	41,009,000	8,008,799	Mica.....	32,907	246,884
Castor seed.....	9,131,623	6,819,365	Rice.....	200,000	222,558
Oranges.....	10,337,780	6,523,075	Mate, — "improved".....	156,995	198,033
Dried ox hides.....	1,233,658	6,417,178	Titanic ore.....	100,000	190,000
Linters.....	3,496,260	6,024,147	Cotton waste.....	79,775	171,184
Carnauba wax.....	459,503	4,868,026	Glands.....	35,093	162,630
Leaf tobacco.....	1,596,037	3,834,278	Claws or hair.....	414,482	157,826
Cocoa.....	680,955	1,784,407	Grape fruit.....	251,598	145,662
Essences for perfumes.....	45,048	1,401,751	Horn parings.....	414,345	142,710
Goat skins.....	84,647	1,386,531	Zircon sand and clay.....	235,800	136,549
Dried and salted tripes.....	776,303	1,304,226	Cumari peas.....	6,548	131,150
Salted ox hides.....	383,308	1,112,622	White lead.....	200,026	114,811
Coquirana rubber.....	201,935	819,610	Cow gall.....	18,654	87,082
Jacarandá (wood).....	1,414,581	818,538	Horse hair.....	9,625	81,008
Tallow.....	546,303	750,392	Frozen bowels.....	51,125	77,036
Timbó (powder).....	121,600	746,303	Carnarina.....	138,609	75,304
Sheep skins.....	55,938	739,643	Unspecified seeds.....	25,579	72,027
Preserved meat.....	255,103	652,824	Ipecacuana.....	2,000	66,352
Massaranduba rubber.....	122,787	626,662	Glue.....	8,035	62,745
"Seringa" rubber from the States of Amazonas, Pará, the North of Mato Grosso and the Acre Territory.....	101,743	576,952	Piassava nuts.....	76,236	58,815
Dried and crushed blood.....	685,322	549,155	Tapioca (meal).....	50,500	56,385
Horns.....	446,072	545,307	Mangabeira rubber.....	15,494	52,078
			Sundry items.....	1,824,490	2,827,768
			TOTALS.....	178,529,440	326,981,602

## BRAZILIAN TRADE WITH GERMANY

Importation and exportation during the 1919-1937 period

YEARS	VALUE (in pounds sterling)			INDEX NUMBERS	
	Brazilian imports	Brazilian exports	Difference	Imports	Exports
1919.....	201,033	701,497	500,464	100	100
1920.....	5,875,913	6,184,210	308,297	2,923	882
1921.....	4,864,004	5,569,531	705,527	2,419	794
1922.....	4,309,270	4,203,335	105,935	2,144	599
1923.....	5,272,469	4,139,051	1,133,418	2,623	590
1924.....	8,322,826	6,304,334	2,018,492	4,140	899
1925.....	11,774,396	6,875,737	4,898,659	5,857	980
1926.....	10,129,524	7,896,341	2,231,183	5,039	1,126
1927.....	8,467,966	9,211,780	743,814	4,212	1,313
1928.....	11,304,292	10,909,168	395,124	5,623	1,555
1929.....	10,994,061	8,305,107	2,688,954	5,469	1,184
1930.....	6,102,496	5,992,221	110,275	3,036	854
1931.....	3,013,934	4,572,900	1,558,966	1,499	652
1932.....	1,959,720	3,257,243	1,297,523	975	464
1933.....	3,362,036	2,905,105	456,931	1,672	414
1934.....	3,569,309	4,625,957	1,056,648	1,775	659
1935.....	5,608,220	5,451,107	157,113	2,790	777
1936.....	7,065,065	5,166,821	1,898,244	3,514	736
1937.....	9,697,139	7,251,813	2,445,326	4,824	1,034



## Importation and exportation by commodity in 1937

MERCHANDISE	QUANTITY (kilos)	VALUE (milrêls)	MERCHANDISE	QUANTITY (kilos)	VALUE (milrêls)
Brazilian imports from Germany					
Coal, etc.	711,033,000	106,365,167	Typewriters.	170,585	11,066,860
Tubes, pipes and accessories.	23,450,769	46,952,815	Cycles and tricycles.	800,302	10,822,330
Tin plate sheeting.	15,151,362	34,519,425	Chassis for motor cars (Auto-		
Aniline dyes.	523,723	31,706,522	mobiles)	546,000	10,594,752
Iron and steel wire for unspeci-			Cutlery.	337,291	9,861,333
fied purposes.	16,801,974	29,053,819	Motorcycles and accessories.	384,400	9,566,819
Iron bars and rods.	24,565,997	28,064,477	Cement.	55,107,000	8,847,331
Spinning and weaving machines	1,681,776	22,549,437	Axles, wheels and spare parts		
Wool yarn and strips.	467,885	22,260,551	for railway rolling stock.	6,240,335	8,687,005
Sewing machines.	1,238,098	21,387,361	Coke and coal.	36,847,000	8,121,429
Iron hoops and strips.	14,925,211	20,999,266	War material.	298,549	8,101,617
Barbed wire.	12,817,245	20,915,375	Locks, hinges, etc.	877,934	7,655,939
Iron plates.	15,118,686	20,022,651	Thermic and ultraviolet appa-		
Dynamos and generators.	1,925,968	20,007,197	ratus.	114,179	7,316,681
Prepared drugs.	159,825	19,162,415	Galvanized iron plates.	4,151,355	7,222,620
Unspecified motors.	1,638,446	18,270,968	Spare parts and accessories for		
Motor cars (Automobiles).	2,376,000	18,054,922	construction purposes.	5,681,947	6,773,621
Skins and hides dyed and varni-			Wood pulp for paper making.	7,390,332	6,703,194
shed.	168,150	17,408,110	Radio apparatus.	132,646	6,577,532
Internal combustion motors,			Machines and electrical appa-		
etc.	1,484,406	15,086,657	ratus for technical use.	419,991	6,243,751
Industrial machinery.	1,234,893	14,751,710	Toys of non-specified raw ma-		
Medicinal injections.	16,988	14,568,370	terial.	192,797	6,096,545
Laminated or hammered copper	1,991,763	14,003,178	Spare parts and accessories of		
Rails and inter-connection pieces			appliances for chemistry		
for railroads and street rail-			and medical services.	231,760	6,078,128
ways.	12,826,789	13,913,583	Rubber tires (Pneumatic tires)	498,863	5,899,406
Big tools.	3,159,097	13,723,454	Cranes.	1,127,123	5,567,289
Coal briquettes (Patent fuel).	81,243,000	12,529,402	Aeroplanes.	12,000	5,446,077
Manual tools and utensils.	922,455	12,498,697	Sundry items.	102,590,592	475,040,307
News Print Paper.	10,002,178	12,186,736			
Steel bars and rods.	5,786,668	11,095,312	TOTALS.	1,186,915,333	1,270,348,343

## Brazilian exports to Germany

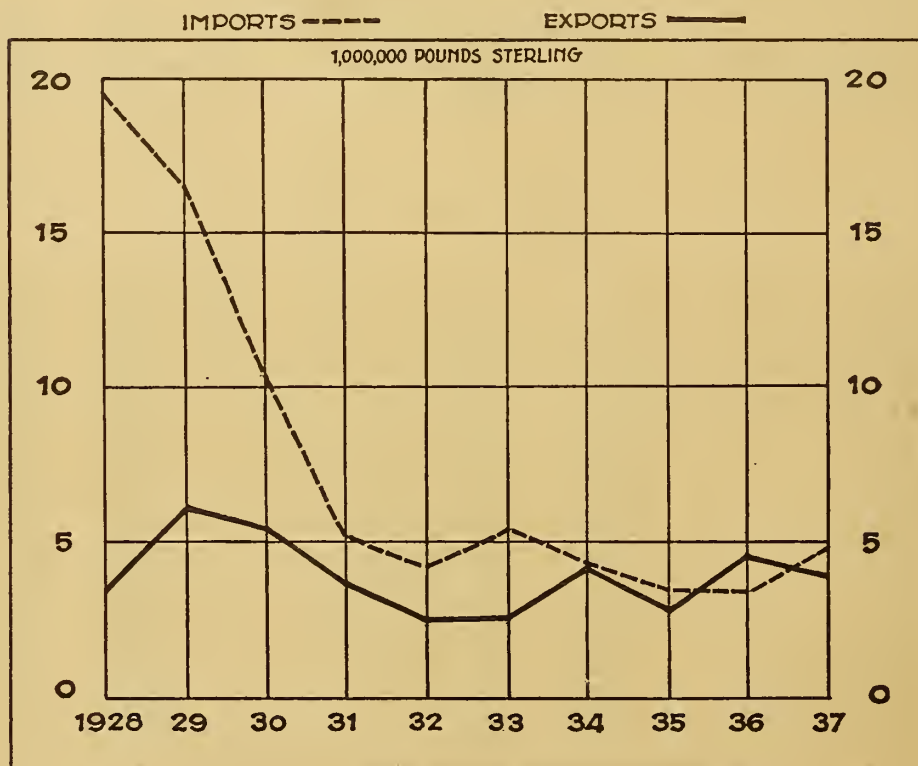
Raw cotton.	84,745,961	316,420,894	Linseed cakes.	2,054,870	871,717
Coffee.	75,708,720	243,537,879	Mica.	52,475	857,617
Salted ox hides.	18,375,634	61,092,956	Cotton—seed bran.	2,197,163	844,314
Leaf tobacco.	15,158,853	37,503,305	Bones.	1,833,679	786,760
Rubber.	6,258,724	33,356,015	Unspecified skins.	24,732	738,481
Cotton seed cattle cakes.	79,704,195	29,853,915	Skins.	78,255	685,062
Dried ox hides.	5,166,824	28,188,287	Twist tobacco.	246,129	654,813
Wool.	2,702,984	24,773,512	Ipecacuana.	16,507	645,872
Wheat bran.	80,558,752	22,935,365	Coquirana (rubber).	139,705	607,935
Linters.	8,900,956	13,544,396	Cotton—seed.	2,220,567	564,175
Cocoa.	2,542,140	5,417,336	Frozen beef.	307,577	559,224
Cotton waste.	2,204,619	5,030,345	Zirconic ore.	714,980	523,210
Oranges.	6,386,081	4,078,750	Goat skins.	24,711	513,785
Shelled Brazil nuts.	1,611,350	3,740,411	Essences for perfumes.	15,224	467,510
Carnauba wax.	337,146	3,578,768	Carnarinha.	732,140	444,729
Horse hair.	331,366	3,375,172	Bananas.	3,455,000	419,000
Pine (wood).	9,950,189	2,608,826	Oiticica oil.	145,093	399,448
Piassava.	1,236,227	2,251,179	Coconut butter.	79,902	378,511
Grease.	1,102,418	1,879,508	Cigars and cheroots.	19,844	361,251
Unspecified precious stones.	499	1,851,799	Guarubá (wood).	1,410,727	350,096
Dried and salted tongues.	591,081	1,355,489	Rock crystal.	29,806	340,387
Cotton—seed oil.	963,694	1,325,793	Mate ("improved").	326,654	337,912
Massaranduba (rubber).	252,228	1,197,493	Nickel ore.	4,160,550	327,040
Tallow.	753,729	996,838	Copaiba oil.	171,881	311,300
Castor oil.	1,182,827	940,437	Sundry items.	6,961,141	6,996,481
Horse cloth (made with sheep-					
skin).	137,604	919,264	TOTALS.	434,284,093	871,740,582



## BRAZILIAN TRADE WITH GREAT BRITAIN

Importation and exportation during the 1918-1937 period

YEARS	VALUE (In pounds sterling)			INDEX NUMBERS	
	Brazilian Imports	Brazilian exports	Difference	Imports	Exports
1918.....	10,783,721	6,168,829	4,614,892	100	100
1919.....	12,737,126	9,483,666	3,253,460	118	154
1920.....	27,197,417	8,759,398	18,438,019	252	140
1921.....	12,336,595	4,073,912	8,262,683	114	66
1922.....	12,544,534	6,811,535	5,732,999	144	110
1923.....	13,427,738	5,120,797	8,306,941	124	83
1924.....	16,346,931	3,263,213	13,083,718	152	53
1925.....	18,770,209	5,181,531	13,588,678	174	84
1926.....	15,207,459	3,224,513	11,982,946	141	62
1927.....	16,899,379	3,019,036	13,880,343	157	49
1928.....	19,518,764	3,354,236	16,164,528	181	54
1929.....	16,638,853	6,176,614	10,462,239	154	100
1930.....	10,405,054	5,457,205	4,947,849	96	88
1931.....	5,018,389	3,560,891	1,457,498	46	58
1932.....	4,175,278	2,571,703	1,603,575	39	42
1933.....	5,469,327	2,677,171	2,792,156	51	43
1934.....	4,365,413	4,263,057	102,356	40	70
1935.....	3,409,175	3,055,142	354,033	32	49
1936.....	3,385,356	4,662,010	1,276,654	31	76
1937.....	4,909,124	3,857,188	1,051,936	45	62





## Importation and exportation by commodity in 1937

MERCHANDISE	QUANTITY (kilos)	VALUE (milréis)	MERCHANDISE	QUANTITY (kilos)	VALUE (milréis)
Brazilian imports from Great Britain					
Electric tramway cars.....	3,025,000	30,945,555	Dressed and carded skins.....	30,311	3,472,461
Street railway trailers.....	3,745,000	27,672,205	Corrugated iron plates for house building purposes and for drainage systems.....	1,835,652	3,277,375
Cotton thread (ordinary strength 2 or 3 ply).....	862,349	27,618,770	Steel bars and rods.....	1,465,137	3,064,304
Spinning and weaving machines	3,676,844	25,632,586	Machines and accessories for unspecified industries.....	142,335	2,981,054
Caustic soda.....	20,813,301	21,370,540	Machines and accessories for mining purposes.....	390,904	2,878,940
Railway cars.....	3,990,000	20,043,576	Instruments and accessories for mechanical measuring purposes.....	278,255	2,865,354
Laminated tin plates.....	8,990,924	18,114,328	Rails and inter-connection pieces for railroads and street railways.....	1,923,280	2,812,542
Cod.....	6,506,261	15,508,497	Manual tools for workshops...	199,557	2,730,010
Heavy tools.....	3,075,993	15,156,541	Electric dynamos and generators with motors.....	167,032	2,683,003
Pure linen textiles.....	324,132	14,550,590	Flock silk thread.....	17,485	2,587,070
Locomotives.....	2,380,000	13,907,403	Apparatuses and accessories for telegraphic installations....	56,616	2,468,631
Jute yarn for weaving purposes	4,176,393	12,986,863	Internal combustion motors....	97,390	2,432,516
Tubes, pipes, and accessories...	5,399,095	10,215,453	Operative machines for Government workshops.....	105,252	2,387,425
Tin in bulk.....	497,690	10,118,067	Chassis for lorries (trucks)...	90,000	2,316,155
Rubber tires (Pneumatic tires)	720,720	7,968,371	Explosives.....	173,856	2,219,105
Laminated or hammered copper	1,281,127	7,425,482	Lubricating mineral oil.....	1,460,848	2,182,554
Coal, including anthracite.....	602,635,000	7,351,234	Cement.....	14,595,000	2,089,571
Coal briquettes (Patent fuel)...	61,971,000	7,194,985	Spare parts for spinning and weaving machines.....	121,282	2,074,972
Potassium or hali.....	15,513,404	6,920,481	Looms.....	594,164	2,056,834
Axles, wheels and spare parts for railway cars.....	2,684,778	6,875,280	Tea.....	79,808	2,039,085
Various woollen textiles.....	67,200	6,745,694	Sundry items.....	37,025,901	233,186,230
Accessories for spinning and weaving machines.....	501,660	6,267,230	TOTALS.....	827,060,262	641,924,538
Jute in bulk.....	3,022,697	5,653,556			
Spare parts and accessories for spinning machines.....	276,864	3,117,780			
Whiskey.....	194,491	4,706,744			
Wood pulp for paper making	5,064,394	4,261,584			
Iron plates, sheets, etc.....	2,629,251	4,246,584			
Electric cables.....	854,201	4,019,485			
Electrical machinery and accessories.....	741,888	3,790,088			
Porcelain tableware.....	588,540	3,733,795			

## Brazilian exports to Great Britain

Raw cotton.....	47,329,767	186,431,750	Maize.....	4,566,860	1,601,033
Oranges.....	98,198,782	63,463,801	Tallow.....	1,036,359	1,597,960
Frozen meat.....	23,519,983	35,548,196	Frozen pork.....	555,676	1,450,997
Brazil nuts.....	5,749,525	20,215,219	Salted pork.....	326,601	1,087,956
Cotton seed.....	62,716,272	18,545,079	Cotton—seed bran.....	4,003,179	1,075,112
Carnauba wax.....	1,550,854	16,661,721	Lard.....	200,000	1,041,600
Diamonds.....	11	10,288,683	Unspecified skins.....	82,981	1,000,634
Ox hides and leather.....	1,991,714	8,470,480	Coquirana rubber.....	243,645	942,165
"Seringa" rubber from the States of Amazonas, Pará, the North of Mato Grosso and the Acre Territory.....	1,532,788	8,329,161	Glue.....	186,384	926,343
Frozen bowels.....	4,706,177	8,163,354	Mica.....	59,003	848,495
Castor beans.....	9,475,085	6,723,590	Rock crystal.....	40,131	813,614
Linters.....	3,564,353	5,922,706	Cocoa.....	360,824	793,636
Grape fruit.....	8,663,026	4,977,514	Cotton—seed oil.....	457,020	752,772
Dried and salted tongues.....	910,329	4,870,462	Essences for perfumes.....	24,007	748,477
Bananas.....	38,036,350	4,848,695	Shelled Brazil nuts.....	61,800	609,789
Wheat bran.....	14,909,621	4,569,177	Horse hair.....	64,804	577,192
Iron ore.....	104,329,000	4,413,716	Frozen mutton.....	243,728	506,200
Salted ox hides.....	1,483,017	4,218,602	Ox hoof oil.....	204,390	479,619
Piassava.....	1,576,315	2,797,428	Dried and salted tripe.....	153,487	418,486
Pine (wood).....	10,170,369	2,493,115	Wheat seeds.....	885,400	370,526
Frozen meat.....	1,760,581	2,419,011	Eggs.....	102,100	329,196
Massaranduba rubber.....	433,541	2,222,913	Tangerines.....	550,699	326,893
Cotton—seed cakes.....	6,503,100	2,147,392	Bones.....	1,289,284	309,880
Cotton waste.....	1,319,356	2,118,775	Aguano (wood).....	1,079,867	284,963
Preserved meat.....	1,198,109	2,046,957	Cumari peas.....	13,588	264,524
Ipeacacua.....	47,710	1,653,906	Meat extract.....	48,146	262,334
			Sundry items.....	3,520,078	4,739,976
			TOTALS.....	472,005,776	458,511,780

## BRAZILIAN TRADE WITH ITALY

Importation and exportation during the 1918-1937 period

YEARS	VALUE (In pounds sterling)			INDEX NUMBERS	
	Brazilian Imports	Brazilian exports	Difference	Imports	Exports
1918.....	1,126,521	6,421,278	5,294,757	100	100
1919.....	1,067,111	3,821,439	2,754,328	95	59
1920.....	3,079,707	7,826,860	4,747,153	273	122
1921.....	1,760,198	3,810,106	2,049,908	156	59
1922.....	1,886,508	3,743,771	1,857,263	167	58
1923.....	1,987,832	4,743,477	2,755,645	176	74
1924.....	2,400,557	7,772,867	5,372,310	213	121
1925.....	3,073,091	6,563,312	3,490,221	273	102
1926.....	2,962,415	5,079,522	2,117,107	263	79
1927.....	2,753,994	4,062,398	1,308,404	244	63
1928.....	3,367,066	4,834,210	1,467,144	299	75
1929.....	2,802,310	4,423,065	1,620,755	249	69
1930.....	2,016,782	2,861,977	845,195	179	45
1931.....	1,197,097	1,947,421	750,324	106	30
1932.....	871,843	1,359,534	487,691	77	21
1933.....	1,131,773	1,150,931	19,158	100	18
1934.....	884,091	1,097,502	213,411	78	17
1935.....	684,401	898,021	213,620	61	14
1936.....	531,210	1,271,805	740,595	47	20
1937.....	603,585	943,766	340,181	53	15



## Importation and exportation by commodity in 1937

MERCHANDISE	QUANTITY (kilos)	VALUE (milréis)	MERCHANDISE	QUANTITY (kilos)	VALUE (milréis)
Brazilian imports from Italy					
Vegetable or artificial silk yarn..	367,598	6,710,676	Printed books.....	31,548	743,954
Olive oil.....	798,520	6,607,526	Aniline dyes, etc.....	28,017	733,943
Silk thread for weaving purposes	65,108	6,109,649	Cigarette paper.....	100,896	690,639
Common table wine.....	1,598,008	4,186,012	Internal combustion motors...	37,203	627,906
Hemp in bulk.....	528,713	2,993,107	Various woollen textiles	9,478	619,036
Rubber tires (Pneumatic-tires)	268,493	2,615,505	Spare parts and accessories for		
Sulphur in bulk or native.....	4,800,620	1,820,997	spinning machines.....	43,321	610,566
Spinning and weaving machines	197,532	1,792,548	Sewing machines.....	56,979	605,733
Woollen thread for weaving pur-			Citric acid.....	87,250	595,530
poses.....	45,266	1,754,435	Tartaric acid.....	83,850	594,903
Medicinal injections.....	1,181	1,597,031	Bitter wines.....	69,680	568,054
Laminated tin plates.....	552,988	1,564,699	Hemp yarn for unspecified uses	56,089	554,141
Cheese.....	153,679	1,519,486	Aeroplane motors.....	1,629	553,011
Flock silk thread.....	32,744	1,598,450	Medicinal drops.....	4,231	534,751
Marble, alabaster, porphyry....	2,647,663	1,439,951	Dyed or coloured textiles....	15,559	510,658
Industrial machinery and acces-			Accessories for spinning and		
sories.....	158,100	1,426,112	weaving machines.....	31,820	491,037
Printing machines and accesso-			Electric ventilators, drying-ap-		
ries.....	145,225	1,370,200	paratus and vibrators.....	36,938	485,011
Railway cars.....	18,000	1,310,761	Spare parts for spinning and		
Artificial silk flock for thread			weaving machines.....	29,636	437,075
manufacture.....	176,320	1,102,726	Intermediary substances for		
Electric motors and accessories.	98,124	1,101,138	aniline manufacture.....	27,164	373,701
Spirals and spheres for pivots	34,375	1,039,524	Pure linen textiles.....	9,263	330,633
Nuts.....	255,456	1,006,244	Bed and table linen, etc., in ge-		
Motor cars (Automobiles).....	175,500	945,210	neral.....	3,161	306,164
Prepared drugs and medicines..	15,250	796,517	Crepon and other crinkled paper	26,291	302,128
Typewriters.....	15,029	786,155	Sundry items.....	2,316,475	14,479,599
Vaccines and serums in containers			TOTALS.....	16,252,131	79,691,960
or tubes.....	1,166	749,128			

## Brazilian exports to Italy

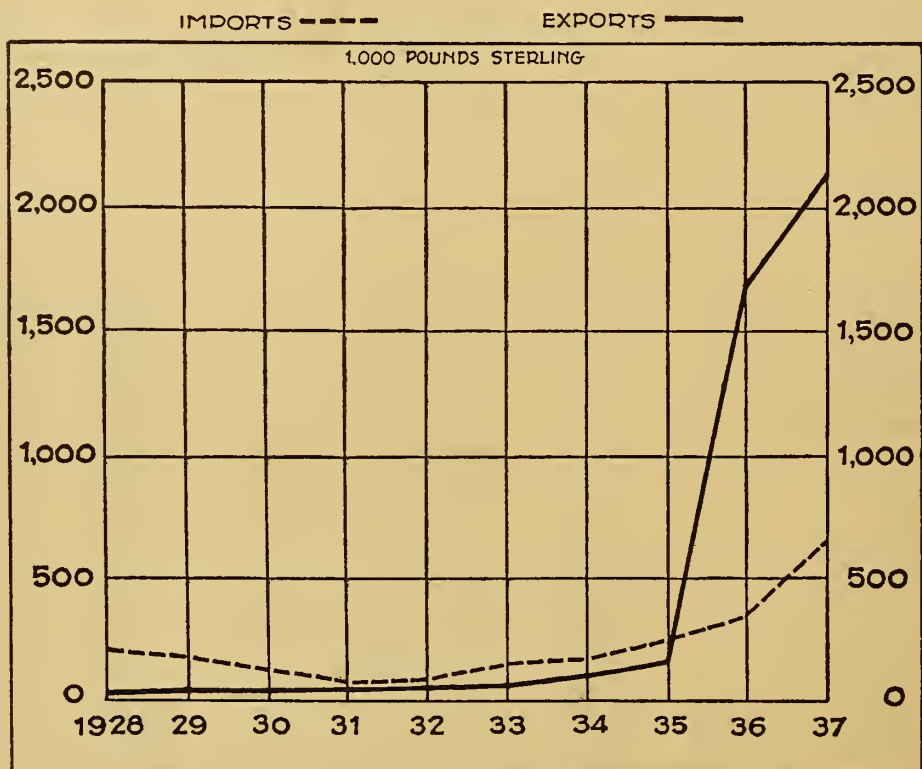
Coffee.....	15,158,400	45,946,277	Pine (wood).....	400,000	100,000
Raw cotton.....	7,986,821	35,076,078	Oiticica oil.....	21,185	87,087
Castor beans.....	10,645,368	8,718,725	Chrome.....	850,000	85,000
Frozen meat.....	4,587,472	6,747,350	Cedar (wood).....	100,000	58,550
Cocoa.....	2,267,940	5,969,158	Claws or nails.....	81,330	33,175
Salted ox hides.....	601,917	1,777,403	Cotton waste.....	17,500	30,600
Linters.....	1,142,984	1,815,904	Unspecified wooden goods.....	4,603	30,500
"Seringa" rubber from the			Rock crystal.....	537	29,000
States of Amazonas, Pará,			Rice without husk.....	24,947	27,869
the North of Mato Grosso			Cigars.....	2,126	20,794
and the Acre Territory....	222,682	1,191,488	Carnarinha.....	25,204	14,619
Dried ox hides.....	193,214	1,056,630	Jacarandá (wood).....	17,000	13,100
Carnauba wax.....	82,038	914,367	Massaranduba rubber.....	2,970	11,880
Dried and salted tripes.....	161,816	385,355	Oranges.....	15,200	10,000
Grease.....	153,689	285,325	Piassava.....	2,600	6,000
Frozen bowels.....	123,726	243,341	Piassava kernels.....	5,080	4,000
Horns.....	145,962	228,148	Horn shreds and scrapings....	12,500	3,650
Guarubá (wood).....	1,069,171	213,834	Unspecified cotton goods.....	394	3,000
Louro vermelho (wood).....	815,153	203,788	Printed works.....	50	3,000
Andiroba (wood).....	917,799	197,320	Unspecified medicinal leaves		
Leaf tobacco.....	73,723	191,554	and roots.....	30,000	1,335
Horse hair.....	17,392	180,405	Meat extracts.....	127	1,270
Tallow.....	102,587	178,575	Live plants.....	2,066	800
Frijó (wood).....	495,146	161,262	Cigarettes.....	52	500
Guaripeas.....	7,565	160,192	Pineapples.....	475	350
Glycerine.....	22,686	140,841	Unspecified table fruits.....	200	250
Mica.....	13,744	121,496			
Frozen pork.....	34,056	101,272	TOTALS.....	48,660,197	112,782,417



## BRAZILIAN TRADE WITH JAPAN

Importation and exportation during the 1918—1937 period

YEARS	VALUE (in pounds sterling)			INDEX NUMBERS	
	Brazilian imports	Brazilian exports	Difference	Imports	Exports
1918.....	326,226	14,977	311,249	100	100
1919.....	500,624	20,181	480,443	153	135
1920.....	591,806	18,675	573,131	181	125
1921.....	221,326	10,969	210,357	68	73
1922.....	77,466	16,419	61,047	24	109
1923.....	88,573	22,411	66,162	27	150
1924.....	118,409	13,856	104,553	36	92
1925.....	156,643	10,201	146,442	48	68
1926.....	155,815	15,534	140,281	48	103
1927.....	118,924	18,847	100,077	36	126
1928.....	200,054	29,552	170,502	61	197
1929.....	187,489	39,593	147,896	57	264
1930.....	115,923	34,749	81,174	35	232
1931.....	70,369	45,475	24,894	22	304
1932.....	81,760	53,611	28,149	25	358
1933.....	154,294	60,259	94,035	47	402
1934.....	169,465	105,202	64,263	52	702
1935.....	246,852	158,098	88,754	76	1,056
1936.....	349,609	1,683,333	1,333,724	107	11,239
1937.....	647,472	2,122,106	1,474,634	198	14,170





## Importation and exportation by commodity in 1937

MERCHANDISE	QUANTITY (kilos)	VALUE (milréis)	MERCHANDISE	QUANTITY (kilos)	VALUE (milréis)
Brazilian imports from Japan					
Silk yarn for weaving purposes	236,556	17,952,283	Gallalite goods for electric light installations	42,197	569,206
Woolen yarn for weaving purposes	397,868	14,226,139	Natural silk yarn	9,423	480,783
Iron and steel wire for unspecified uses	5,632,573	7,420,255	Celluloid sheets, bars etc.	40,029	444,067
Porcelain tableware	1,204,853	6,377,676	Sewing machines	35,972	412,328
Rails and inter-connection pieces for railroads and street railways	5,485,301	4,161,219	Printed books	78,694	412,057
Corrugated iron plates for house building purposes and for drainage systems or limber-holes	1,606,898	2,635,236	Flour and meal, — unspecified	22,342	339,690
Arsenate of lead	690,000	2,060,055	Pulverizers, insulators, etc.	24,591	333,610
Toys	49,391	1,959,750	Toys made with unspecified raw material	21,265	331,880
Common lamps	86,769	1,588,906	Talking machines	20,251	323,879
Artificial or vegetable silken thread	69,803	1,415,842	Transparent gelatine pellicles	24,112	309,200
Unspecified mother-of-pearl goods	16,048	1,190,002	Caustic soda	451,000	304,244
Barbed wire	1,086,922	1,058,743	Spare parts and accessories for spinning machines	22,901	301,004
Tubes, pipes and accessories	686,060	1,053,036	Galvanized iron manufactured goods	83,194	291,742
Crepon and other crinkled paper	99,828	1,020,441	White arsenic	229,223	273,039
Rubber tires (Pneumatic tires)	123,002	1,000,785	Rubber material for electric light installations, etc.	15,630	243,070
Mother-of-pearl	97,942	957,347	Anti-parasitic preparations	68,753	237,888
Spare parts for spinning and weaving machines	95,591	765,023	Paper textiles	13,403	23,306
Preserved fish and extracts	86,216	760,858	Pure linen textiles, — unspecified	7,632	226,809
Unspecified manufactured goods	22,733	746,791	Galvanized iron sheets	129,726	225,816
Spectacles, binocles, etc.	10,676	720,579	Special lamps for electric lighting	5,570	220,883
Mixed cotton-rubber manufactured goods	62,649	695,512	Phonograph records	10,065	202,413
Dried legumes and vegetables	99,159	684,447	Manual tools and utensils	18,171	198,014
Pedals for bicycles and tricycles	78,811	588,285	Electric ventilators and aspirators (vacuum cleaners)	7,170	183,953
Velvet, plush and the like	23,576	587,070	Paper manufactured goods, — unspecified	10,613	173,490
			Office and school equipment	2,737	163,366
			Sundry items	1,737,265	7,559,742
			TOTALS	21,081,159	85,625,659

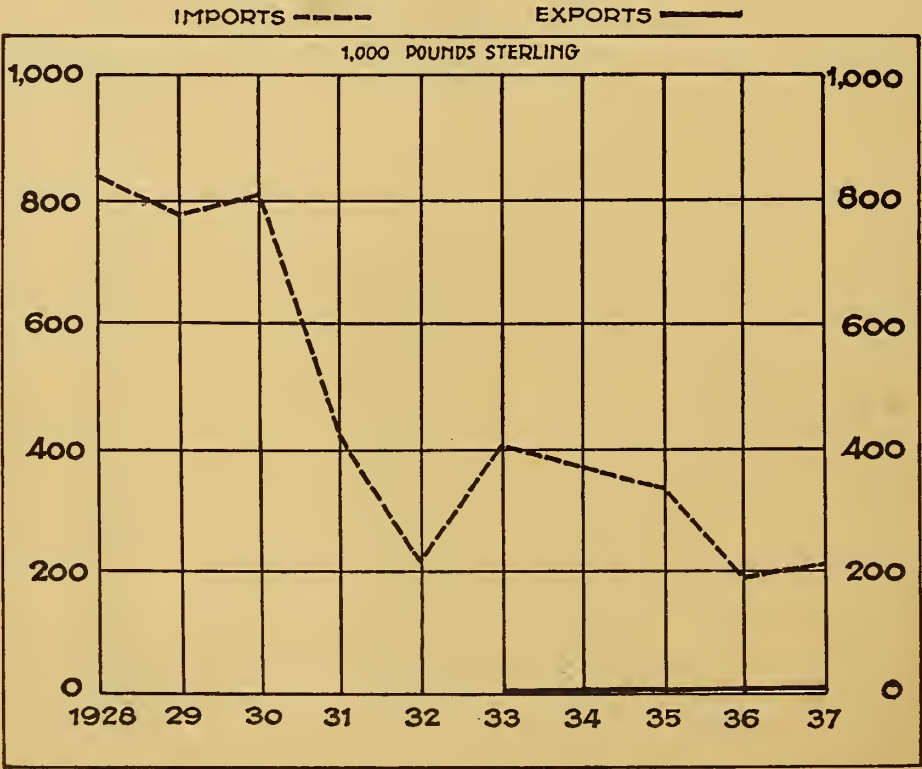
## Brazilian exports to Japan

Raw cotton	50,918,047	222,761,252	Rutile	10,000	10,602
Coffee	3,663,420	11,485,461	Massaranduba rubber	1,450	7,250
Crystal	204,353	1,709,896	Sheep skins	619	6,618
Cocoa	465,453	1,132,965	Cumar peas	330	6,006
Coconut butter	101,472	544,308	Dried and salted tripes	2,097	6,814
Carnauba wax	45,619	471,376	Preserved meat	1,186	3,364
Tinplate	2,004,390	470,633	Indian curios	195	3,000
Castor beans	343,717	285,886	Deer skins	179	2,884
"Seringa" rubber from the States of Amazonas, Pará, the North of Mato Grosso and the Acre Territory	50,298	284,355	Grease	1,634	2,734
Andiroba (wood)	843,960	241,308	Unspecified vegetable fibres	1,786	2,612
Copaiba oil	43,816	223,727	Nickel ore	10,000	2,508
Freijó (wood)	576,410	143,313	Tallow	1,152	2,422
Mica	3,744	92,760	Precious stone	1	1,697
Bones	130,210	78,985	Wild boar skins	109	1,635
Claws or nails	107,163	57,545	Acajú (wood)	8,160	1,632
Unspecified skins	1,140	38,736	Jerked beef	795	1,525
Essences for perfumes	1,201	38,456	Unspecified ores	2,500	1,200
Massaranduba (wood)	165,928	28,961	Pine (wood)	5,794	1,064
Agates	8,364	28,560	Unspecified wood in bulk	2,700	875
Brazil nuts	6,306	26,193	Horse cloths (made with sheep skins)	171	800
Navels	35,266	25,719	Non-edible slaughterhouse products	24	642
Salted ox hides	6,704	20,787	Tortoise-shell	22	640
Macauba (wood)	68,350	16,677	Shelled Brazil nuts	90	630
Jutaleica resins	9,355	16,486	Aguano (wood)	2,308	470
Timbó (powder)	3,100	16,000	Andiroba oil	192	440
Gall stones	20	14,779	Cashew nuts	41	120
Dried ox hides	3,459	11,541	TOTALS	59,864,802	240,335,832

BRAZILIAN TRADE WITH MEXICO

Importation and exportation during the 1918—1937 period

YEARS	VALUE (In pounds sterling)			INDEX NUMBERS	
	Brazilian Imports	Brazilian exports	Difference	Imports	Exports
1918.....	334,342	—	334,342	42	—
1919.....	555,333	—	555,333	70	—
1920.....	1,269,282	—	1,269,282	160	—
1921.....	1,614,083	—	1,614,083	203	—
1922.....	857,449	—	857,449	108	—
1923.....	795,322	47,279	748,043	100	100
1924.....	792,581	—	792,581	100	—
1925.....	1,203,421	—	1,203,421	151	—
1926.....	970,271	—	970,271	122	—
1927.....	1,015,728	—	1,015,728	128	—
1928.....	840,515	—	840,515	106	—
1929.....	787,634	—	787,634	99	—
1930.....	808,965	—	808,965	102	—
1931.....	422,533	—	422,533	53	—
1932.....	218,736	—	218,736	27	—
1933.....	406,253	152	406,101	51	—
1934.....	373,994	774	373,220	47	2
1935.....	328,871	582	328,289	41	1
1936.....	193,569	1,604	191,965	24	3
1937.....	209,721	2,286	207,435	26	5



## Importation and exportation by commodity in 1937

MERCHANDISE	Quantity (kilos)	Value (milréis)	MERCHANDISE	Quantity (kilos)	Value (milréis)
Brazilian imports from Mexico					
Gasolene .....	33,241,000	12,861,389	Leaves, flowers and herbs for medicinal uses.....	8,000	43,866
Kerosene.....	13,363,000	7,952,603	Mineral oils for electric apparatus...	38,610	36,085
Gasolene in drums, cans and other containers.....	2,140,646	2,803,541	Fibres and fibrous material.....	5,496	27,485
Mineral oil for lubrication purposes..	1,571,451	1,091,875	Mineral oils for unspecified use.....	41,156	25,505
Asphalt and bitumen.....	2,486,280	817,501	Straw for brooms.....	3,145	22,783
Turpentine of mineral origin.....	560,534	478,773	Spinning and weaving machines.....	1,119	10,915
Drums for liquids, etc.....	179,223	416,577	Products containing asphalt and bitumen.....	28,173	10,044
Mineral oils for combustion purposes.	394,000	281,988	Substances for the hide and ekin industry.....	3,804	4,587
Lead in bulk.....	110,988	277,342	Felt and sarsenet in rolls and finished products.....	94	3,692
Turpentine and turps.....	185,787	193,735	Sundry items.....	7,044	1,559
Unspecified plants, leaves and roots.	8,603	54,095	TOTALS.....	54,378,153	27,415,940

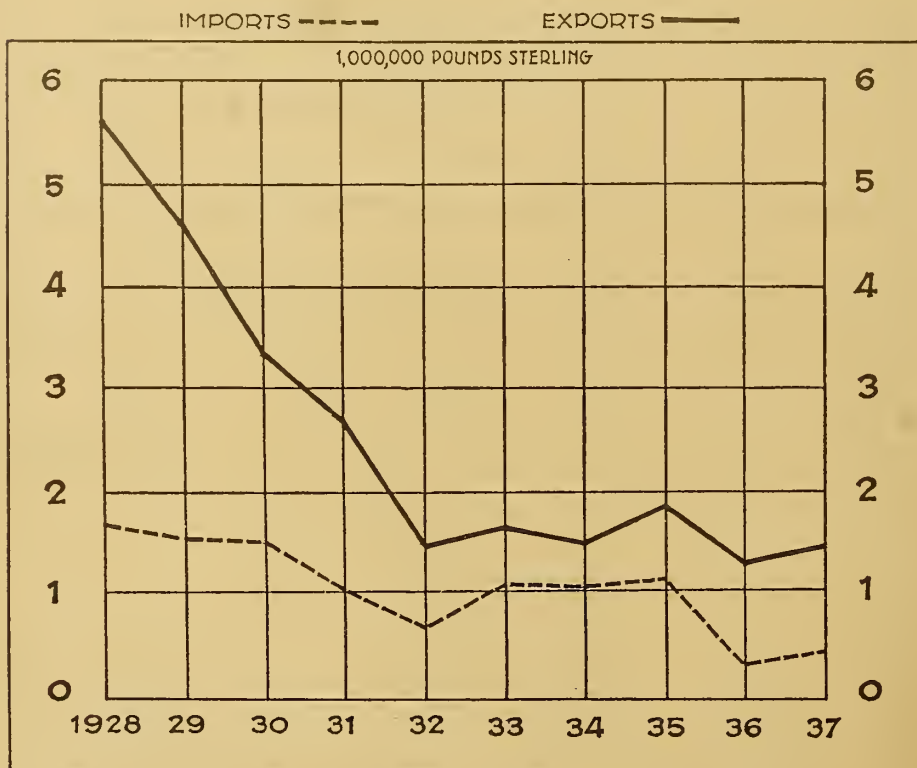
## Brazilian exports to Mexico

Medicines.....	3,456	261,342	Jerked beef.....	827	2,036
			TOTALS.....	4,283	263,378

## BRAZILIAN TRADE WITH NETHERLANDS

Importation and exportation during the 1918—1937 period

YEARS	VALUE (In pounds sterling)			INDEX NUMBERS	
	Brazilian Imports	Brazilian exports	Difference	Imports	Exports
1918.....	63,093	—	63,093	20	—
1919.....	314,190	4,090,386	3,776,196	100	100
1920.....	639,853	3,011,097	2,371,244	204	74
1921.....	523,044	4,164,541	3,641,497	166	102
1922.....	738,587	3,892,002	3,153,415	235	95
1923.....	536,716	4,115,379	3,578,663	171	100
1924.....	711,608	7,282,797	6,571,189	226	178
1925.....	1,156,050	6,279,270	5,123,220	368	153
1926.....	962,009	5,798,765	4,836,756	306	142
1927.....	1,395,520	5,018,576	3,623,056	444	123
1928.....	1,701,335	5,611,605	3,910,270	541	137
1929.....	1,543,231	4,665,543	3,122,312	491	114
1930.....	1,510,623	3,334,004	1,823,381	481	82
1931.....	1,003,000	2,730,884	1,727,884	319	67
1932.....	698,475	1,482,952	784,477	222	36
1933.....	1,072,018	1,641,629	569,611	341	40
1934.....	1,031,007	1,489,151	458,144	328	36
1935.....	1,119,757	1,888,071	768,314	356	46
1936.....	377,654	1,286,495	908,841	120	31
1937.....	436,645	1,410,405	973,760	139	34





## Importation and exportation by commodity in 1937

MERCHANDISE	QUANTITY (kilos)	VALUE (milrís)	MERCHANDISE	QUANTITY (kilos)	VALUE (milrís)
Brazilian imports from Netherlands					
Radio apparatus.....	248,996	9,722,864	Peas.....	418,969	532,129
Radio-telegraphic apparatus....	111,170	4,712,327	Launches, tugs, lighters, etc... s/p		481,580
Leaf tobacco.....	75,568	3,620,198	Coal of vegetable origin.....	131,755	398,136
Super phosphate of calcium....	14,150,382	3,553,630	Leather straps, strips, etc.....	21,659	374,644
Aniline dyes.....	10,972	3,535,611	Newsprint paper.....	160,740	364,757
Tin in bulk.....	146,725	2,871,510	Apparatuses and utensils for technical and professional uses	15,410	361,588
War material.....	4,500	2,168,911	Laminated tin plates.....	207,312	360,069
Vegetable or artificial silk thread for weaving purposes.....	80,576	1,796,093	Bovine cattle for breeding purposes.....	22,400	315,290
Newsprint paper including couchs	529,245	1,570,492	Engineering tools and equipment	354	286,927
Seed potatoes.....	1,970,880	1,556,945	Skins and hides, dyed and varnished.....	2,972	294,203
Radio valves.....	2,992	1,363,603	Wool in bulk, carded, etc.....	18,276	285,430
Coal, —including anthracite....	8,225,000	1,247,553	Cinematographic machines and apparatus.....	4,452	283,070
Tubes, pipes and accessories....	781,019	1,107,082	Slaughterhouse products.....	7,330	257,264
Cardboard and pastboard in sheets and rolls for printing and other purposes.....	218,959	884,141	Natural and artificial sugars and edulcoration substances	54,000	248,615
Potatoes.....	1,136,880	815,147	Accessories for tugs, dredges, etc.....	49,931	242,444
Radio accessories.....	15,626	798,047	Tea.....	8,061	230,966
Chemical and synthetic fertilizers.....	1,384,245	769,815	Lead in bulk.....	86,835	228,952
Industrial machinery and accessories.....	68,795	729,612	Nickel in cubes and sheets....	15,177	224,861
Porcelain sanitary equipment....	97,571	704,104	Spices and raw condiments....	69,891	204,730
Quinine and its salts.....	1,497,000	563,678	Sundry items.....	5,453,123	6,267,836
Rails and inter-connection pieces for railroads and street railways.....	223,419	550,370	TOTALS.....	37,729,167	56,895,224

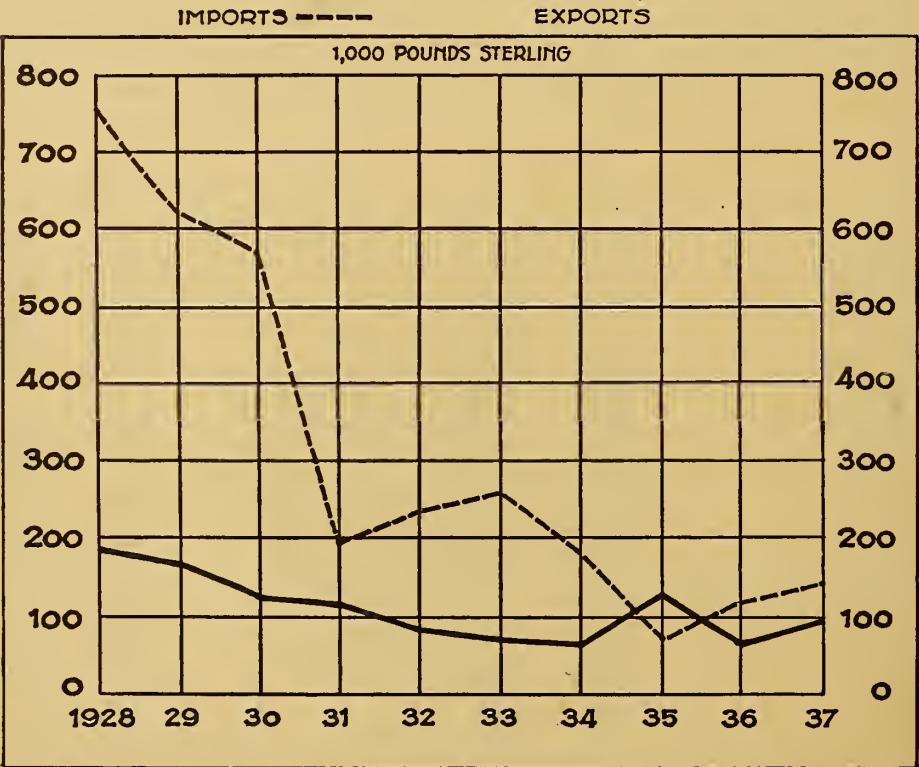
## Brazilian exports to Netherlands

Coffee.....	17,484,420	54,214,220	Essences for perfumes.....	5,925	186,721
Leaf tobacco.....	9,911,444	23,184,455	Linseed cakes.....	434,220	169,063
Raw cotton.....	4,919,744	19,888,792	Zircon sand and clay.....	237,600	166,219
Salted ox hides.....	4,736,236	14,751,200	Carnarinha.....	275,400	157,501
Oranges.....	15,395,374	9,350,629	Rice bran.....	638,114	151,640
Diamonds.....	9	8,360,079	Glue.....	61,352	144,480
Cocoa.....	3,517,360	8,284,784	Animal fertilizers.....	297,400	143,579
Dried ox hides.....	1,119,807	5,653,098	Tangerines.....	241,338	139,722
Cotton linters.....	2,458,511	3,627,052	"Seringa" rubber from the States of Amazonas, Pará, the North of Mato Grosso and the Acre Territory.....	29,606	138,382
Manganese.....	16,155,000	2,638,333	Bananas.....	1,036,780	126,037
Coconut butter.....	395,727	2,037,002	Horns.....	117,814	121,925
Maize.....	3,719,911	1,446,873	Meat extract.....	11,521	109,162
Frozen meat.....	973,953	1,441,478	Cigars and cigarettes.....	6,401	104,621
Preserved meat.....	456,786	1,402,723	Cumarú peas.....	4,101	76,644
Wheat bran.....	4,980,750	1,347,684	Dried and crushed blood.....	101,604	69,530
Iron ore.....	29,739,000	1,277,954	Leather.....	6,358	67,738
Castor beans.....	1,608,117	1,273,458	Cotton — seed.....	200,040	67,370
Bones.....	1,604,680	634,094	Glands.....	14,608	65,772
Grease.....	321,584	607,959	Paina (Brazilian vegetable down).....	20,866	62,987
Cocoa cakes.....	725,000	479,099	Grape Fruit.....	110,858	62,920
Unspecified skins.....	18,438	400,008	Timbó (powder).....	10,150	60,900
Horse hair.....	38,119	359,617	Jequitibá (wood).....	220,000	55,000
Dried and salted tripes.....	168,837	333,803	Sundry items.....	868,061	774,146
Oiticica oil.....	125,270	271,581	TOTALS.....	126,019,360	167,801,223
Cotton waste.....	135,570	250,240			
Cotton — seed oil.....	195,564	237,558			
Carnauba wax.....	20,892	224,293			
Piassava.....	111,525	214,914			
Beeswax.....	21,707	195,896			
Goat skins.....	9,908	190,288			

BRAZILIAN TRADE WITH NORWAY

Importation and exportation during the 1918-1937 period

YEARS	VALUE (in pounds sterling)			INDEX NUMBERS	
	Brazilian imports	Brazilian exports	Difference	Imports	Exports
1918.....	229,830	512,723	282,893	100	100
1919.....	380,767	1,016,129	635,362	166	198
1920.....	1,298,741	130,757	1,167,984	565	25
1921.....	478,371	141,532	336,839	208	28
1922.....	490,848	208,917	281,931	214	41
1923.....	445,928	252,636	193,292	194	49
1924.....	620,004	224,465	395,539	270	44
1925.....	687,244	239,327	447,917	299	47
1926.....	615,997	225,969	390,028	268	44
1927.....	551,830	231,809	320,021	240	45
1928.....	756,507	184,012	572,495	329	36
1929.....	624,464	164,881	459,583	272	32
1930.....	572,583	128,010	444,573	249	25
1931.....	197,156	114,223	82,933	86	22
1932.....	234,291	87,449	146,842	102	17
1933.....	260,450	71,473	188,977	113	14
1934.....	182,032	69,957	112,075	79	14
1935.....	74,787	125,520	50,733	32	24
1936.....	121,964	67,456	54,508	53	13
1937.....	142,101	98,895	43,206	62	19



## Importation and exportation by commodity in 1937

MERCHANDISE	Quantity (kilos)	Value (milréis)	MERCHANDISE	Quantity (kilos)	Value (milréis)
Brazilian imports from Norway					
Wood pulp for paper making.....	6,856,672	5,208,413	Manufactured goods of galvanized iron	737	18,386
Aluminium in bulk.....	220,109	1,505,069	Cyanide of calcium.....	24,625	16,406
Iron and steel manufactured products,			Sardines.....	1,384	16,384
— unspecified.....	20,202	466,075	Unspecified paper.....	4,300	10,968
Cod liver oil.....	61,373	254,963	Manufactured goods, — unspecified.	1,353	10,278
Blasting powder.....	18,144	184,684	Furs.....	8	9,946
Iron in bulk or smelted.....	156,917	169,555	Nitric acid.....	2,973	8,342
Print paper, including couché.....	240,531	159,440	Tubes, pipes and accessories.....	2,360	5,884
Preserved fish and extracts.....	46,024	122,764	Condiments and prepared sauces.....	360	4,246
Nails.....	20,878	55,171	Alcoholic beverages.....	112	2,224
Coal, including anthracite.....	101,000	52,915	Sundry items.....	8,460,984	10,191,872
Unspecified iron and steel.....	38,452	44,566			
Crepon and other crinkled paper...	10,025	26,212	TOTALS.....	16,289,523	18,544,763

## Brazilian exports to Norway

Coffee.....	2,450,040	7,473,926	Cigars and cigarettes.....	2,811	60,695
Cocoa.....	638,580	1,477,947	Rice in husk.....	50,000	35,734
Cotton—seed bran.....	2,898,526	1,107,606	Castor oil.....	9,807	20,000
Oranges.....	567,012	368,100	Casein.....	5,037	11,630
Massaranduba rubber.....	59,840	305,782	Pickled meat.....	2,297	4,594
Zircon sand and clay.....	538,710	251,000	Oiticica oil.....	1,116	4,138
Raw cotton.....	56,512	232,569	Pineapples.....	9,000	4,000
Coquirana rubber.....	43,515	182,161	Animal residues, — unspecified.....	8,400	2,940
Salted ox hides.....	32,029	122,518	Cumarú peas.....	120	2,620
Animal fertilizers.....	188,150	94,447	Preserved meat.....	1,635	2,175
Preserved pork.....	25,107	76,907			
Salted pork.....	23,781	63,824	TOTALS.....	7,611,825	11,905,313

## BRAZILIAN TRADE WITH PORTUGAL

Importation and exportation during the 1918-1937 period

YEARS	VALUE (in pounds sterling)			INDEX NUMBERS	
	Brazilian Imports	Brazilian exports	Difference	Imports	Exports
1918.....	2,027,917	554,625	1,473,292	100	100
1919.....	2,364,542	693,138	1,671,404	117	125
1920.....	2,644,180	2,049,369	594,811	130	389
1921.....	1,102,221	1,258,169	155,948	54	227
1922.....	1,176,931	1,195,832	18,901	58	216
1923.....	1,044,075	1,653,315	609,240	51	298
1924.....	1,259,726	555,340	704,386	62	100
1925.....	1,499,675	564,843	934,832	74	102
1926.....	1,662,628	395,271	1,267,357	82	71
1927.....	1,487,343	363,338	1,124,005	73	65
1928.....	1,857,946	431,028	1,426,918	92	78
1929.....	1,343,067	508,469	834,598	66	92
1930.....	1,047,293	418,754	628,539	52	75
1931.....	394,149	231,207	162,942	19	42
1932.....	469,442	149,190	320,252	23	27
1933.....	602,720	153,093	449,627	30	28
1934.....	458,732	369,511	89,221	23	67
1935.....	363,700	247,491	116,209	18	45
1936.....	463,933	189,750	274,183	23	34
1937.....	519,025	349,816	169,209	26	63





## Importation and exportation by commodity in 1937

MERCHANDISE	QUANTITY (kilos)	VALUE (milrêis)	MERCHANDISE	QUANTITY (kilos)	VALUE (milrêis)
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## Brazilian imports from Portugal

Olive oil.....	1,894,950	16,452,087	Purls, beads, gold braid and fringes.....	1,767	181,431
Common table wines.....	5,295,009	12,559,784	Spices, condiments, etc.....	58,864	176,398
Cork.....	512,130	4,951,736	Vinegar.....	59,686	145,878
Sardines.....	730,419	4,380,743	Albumin, casein, etc.....	1,300	128,085
Olives.....	1,137,856	4,239,842	Nuts.....	23,473	93,394
High quality table wines.....	377,617	3,130,445	Spare parts for spinning and weaving machines.....	5,308	85,554
Brazil nuts.....	1,475,560	2,803,497	Cinematographic films.....	319	84,920
Bitter wines.....	300,844	2,050,923	Foaming wines, including champagne.....	3,724	83,231
Manual tools and utensils for workshops.....	122,867	1,508,970	Ready-made clothes and garments.....	152	68,079
Printed books.....	96,952	1,364,695	Lupines.....	31,214	67,873
Fresh fruits, — unspecified.....	408,880	1,122,966	Iron and steel manufactured goods.....	1,641	65,898
Preserved fish and extracts of same.....	212,505	1,087,258	Cheese.....	3,720	61,893
Marble alabaster and porphyry	2,334,766	959,332	Cod.....	8,880	60,936
Toothpicks.....	81,183	933,621	Heavy tools.....	8,358	60,696
Alcoholic beverages.....	86,108	786,487	Elixirs, syrups and medicinal wines.....	4,390	53,517
Dried fruits, — unspecified.....	204,238	641,601	Cotton manufactured goods, — unspecified.....	1,800	52,654
Yeast and leaven for bread and cake making.....	184,320	629,939	Sealskins, — unspecified.....	6,099	51,213
Almonds.....	39,499	438,128	Potatoes.....	75,000	50,935
Pitch of black resin and other pine resins.....	278,585	422,027	Prepared drugs.....	648	46,218
Chlorurets for scientific use.....	5,967	406,091	Vegetable oils for perfumes and medicines.....	10,182	41,756
Cork or corktree bark.....	109,190	375,061	Clay in bulk.....	96,840	40,561
Silver goods.....	691	266,712	Baggage or objects of personal use.....	353	40,136
Stones, clay and non-metallic minerals.....	348,276	262,736	Sundry items.....	962,593	3,676,129
Turpentine or spirit of turpentine.....	78,039	243,770			
Office and school equipment.....	148,205	230,314			
Cork sheets for cigarette tips.....	3,895	225,453			
Leaves, flowers and herbs for medicinal use.....	39,591	204,331			
			TOTALS.....	17,874,393	68,095,944

## Brazilian exports to Portugal

Raw cotton.....	7,320,582	28,532,819	Frozen meat.....	12,107	16,950
Coffee.....	1,566,120	4,669,081	Flours and fecules, — unspecified.....	5,102	10,090
Salted meat.....	469,826	2,743,112	Cotton textiles.....	1,133	10,000
Andiroba (wood).....	5,582,941	1,364,833	Mate, — "improved".....	6,923	8,652
Macacauba (wood).....	4,164,930	1,000,240	Brazil nuts.....	1,556	6,413
Freijó (wood).....	2,960,836	704,392	Spices.....	3,500	6,000
Dried and salted tripes.....	60,969	703,544	Cigarettes.....	745	5,732
Piassava fibre.....	481,366	703,232	Butter.....	600	4,750
Massaranduba.....	1,520,970	267,041	Unspecified seeds.....	3,000	4,697
Carnauba wax.....	17,294	185,963	Ox hoof oil.....	1,293	3,997
Printed works.....	29,815	174,362	Cedar (wood).....	10,765	3,730
Medicines.....	6,563	149,244	Comfits.....	872	3,383
Louro-vermelho (wood).....	500,387	140,295	Sleepers.....	24,150	3,000
Cigars and cigarettes.....	5,597	130,730	Tapioca meal.....	2,400	2,846
Tucum.....	11,815	125,989	Caroá.....	1,130	2,820
Itaúba (wood).....	393,639	108,523	Horse hair.....	387	2,800
Manioc flour.....	132,170	105,768	Wooden manufactured goods.....	250	2,000
Guarubá (wood).....	443,306	93,907	Edible grains.....	562	1,943
Unspecified skins.....	7,114	69,100	Chemical products.....	270	1,500
Cut tobacco.....	8,058	57,175	Prepared goods, — unspecified.....	2,416	1,263
Pau amarelo (wood).....	226,875	56,719	Twist tobacco.....	373	1,100
Wood in bulk, — unspecified.....	497,799	45,986	Cottonwool (sterilized).....	150	1,060
Cotton waste.....	10,826	26,243	Iron manufactured goods.....	934	1,000
Frozen meat.....	20,595	26,034	Sundry items.....	770	1,979
Jacarandá (wood).....	47,114	23,601			
Tow.....	12,020	22,690			
Jerked beef.....	8,311	20,406			
			TOTALS.....	26,589,226	42,358,739

## BRAZILIAN TRADE WITH SPAIN

Importation and exportation during the 1918-1937 period

YEARS	VALUE (in pounds sterling)			INDEX NUMBERS	
	Brazilian Imports	Brazilian exports	Difference	Imports	Exports
1918.....	937,184	1,332,927	395,743	100	100
1919.....	872,483	2,028,899	1,156,416	93	152
1920.....	1,683,458	662,340	1,021,118	180	50
1921.....	518,784	114,676	404,108	55	9
1922.....	532,664	281,690	250,974	57	21
1923.....	519,206	135,001	384,205	55	10
1924.....	725,229	21,972	703,257	77	2
1925.....	953,311	48,309	905,002	102	4
1926.....	937,530	224,697	712,833	100	17
1927.....	717,694	695,512	22,182	77	52
1928.....	877,122	624,439	252,683	94	47
1929.....	744,019	780,004	35,985	79	58
1930.....	476,299	570,244	93,945	51	43
1931.....	254,680	359,089	104,409	27	27
1932.....	252,577	287,067	34,490	27	21
1933.....	301,076	100,807	200,269	32	8
1934.....	246,714	108,544	138,170	26	8
1935.....	223,026	116,329	106,697	24	9
1936.....	117,158	71,729	45,429	12	5
1937.....	48,417	257,098	208,679	5	19



## Importation and exportation by commodity in 1937

MERCHANDISE	Quantity (kilos)	Value (mlrêls)	MERCHANDISE	Quantity (kilos)	Value (mlrêls)
Brazilian imports from Spain					
Cork.....	29,198	419,985	Paper for industrial use.....	5,047	25,746
Unspecified dried fruits.....	26,287	226,348	Metallic quick-silver.....	680	24,750
Cigarette papers.....	34,328	215,529	Cork manufactures.....	1,554	22,537
Skins prepared, combed, carded, etc....	5,184	182,917	Medicinal injections.....	53	21,935
Preserved fish and extracts.....	34,688	145,480	Cotton thread, (three ply).....	826	21,679
Olive oil.....	17,730	116,534	High quality table wines.....	1,673	15,110
Common table wines with more than 14°.....	8,281	111,286	Printed matter.....	237	14,422
Common table wines.....	18,751	101,661	Green legumes and vegetables.....	1,200	7,848
Sardines.....	10,896	95,866	Perfumery.....	5	6,916
Tartaric acid.....	10,000	81,812	Dried legumes and vegetables.....	1,000	6,329
Cork or sabreiro bark.....	7,316	81,533	Operative machines for workshops...	1,033	5,859
Medicinal drugs.....	1,103	68,038	Books.....	116	5,739
Natural or artificial mineral waters...	7,900	61,281	Barley.....	585	6,234
Unspecified green fruits.....	15,800	47,993	Preserved vegetables and vegetable extracts.....	1,400	5,117
Bitter wines.....	6,062	43,279	Sundry items.....	1,575,402	4,052,575
Flasks, pots, bottles, etc.....	4,238	42,275	TOTALS.....	1,828,573	6,284,613

## Brazilian exports to Spain

Frozen meat.....	17,811,798	25,897,461	Rubber shoes.....	527	6,330
Preserved meat.....	1,204,856	3,537,048	Cigarettes.....	1,000	4,000
Leaf tobacco.....	500,000	1,342,500	Meat extracts and similar products	403	3,299
Jerked beef.....	19,982	64,772	TOTALS.....	19,539,037	30,865,410
Unspecified woollen manufactured goods.....	471	10,000			

## BRAZILIAN TRADE WITH SWEDEN

Importation and exportation during the 1918-1937 period

YEARS	VALUE (in pounds sterling)			INDEX NUMBERS	
	Brazilian imports	Brazilian exports	Difference	Imports	Exports
1918.....	498,152	290,179	207,973	100	100
1919.....	879,024	3,337,429	2,458,405	176	1,150
1920.....	1,475,988	1,788,450	312,462	296	616
1921.....	334,592	961,594	627,002	67	331
1922.....	444,698	1,410,420	965,722	89	486
1923.....	460,196	1,511,679	1,051,483	92	521
1924.....	407,466	2,238,529	1,831,063	82	771
1925.....	732,852	2,177,486	1,444,634	147	750
1926.....	671,484	2,475,594	1,804,110	135	853
1927.....	672,468	1,914,803	1,242,340	135	660
1928.....	721,281	2,278,520	1,557,239	145	785
1929.....	940,203	2,158,626	1,218,423	189	744
1930.....	571,148	1,303,351	732,203	115	449
1931.....	276,237	1,114,653	838,416	55	384
1932.....	232,057	703,821	471,764	47	242
1933.....	290,542	878,201	587,659	58	303
1934.....	344,351	787,180	442,829	69	271
1935.....	340,395	631,193	290,798	68	217
1936.....	513,917	617,194	103,277	103	213
1937.....	891,796	890,838	958	179	307





## Importation and exportation by commodity in 1937

MERCHANDISE	QUANTITY (kilos)	VALUE (milréis)	MERCHANDISE	QUANTITY (kilos)	VALUE (milréis)
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## Brazilian imports from Sweden

Wool pulp for paper making .	63,690,568	54,555,563	Accumulators, batteries, piles, etc.....	13,837	355,816
Newsprint paper.....	17,301,517	14,428,004	Pneumatic appliances.....	5,706	334,716
Internal combustion motors....	203,573	4,054,398	Electric measuring apparatus..	9,193	324,968
Electric apparatus and machines for domestic use.....	68,387	3,986,520	Looms.....	30,187	320,307
Electric refrigerators.....	233,843	3,687,339	Apparatus and utensils for technical use.....	17,494	317,183
Electric dynamos and generators	353,397	3,403,430	Cement.....	2,245	308,504
Spirals and spheres for pivots...	129,745	3,355,439	Insulated copper wire for electric light and power installations.....	14,549	288,950
Chassis for lorries (trucks)....	106,500	2,123,569	Special alloy of current use...	75,471	287,657
Apparatuses and accessories for telegraphic installations.....	21,191	1,990,613	Cutlery.....	1,653	286,664
Motive power generating appliances and power transmission apparatus.....	316,462	1,838,938	Electric motors and accessories	19,497	285,854
Electric ventilators and dust aspirators (Vacuum cleaners)...	27,428	1,305,028	Operative machines and electric apparatus.....	12,391	274,285
Aluminium in bulk.....	121,262	1,116,822	Common lamps.....	3,748	152,770
Chlorate of potassium and sodium.....	379,250	1,115,046	Gelatine transparent pellicles	19,259	244,093
Electric transformers.....	154,750	1,106,052	Perchlorate of ammonium.....	52,000	238,142
Apparatus and accessories for domestic use.....	65,456	1,057,503	Unspecified pumps and air compressors.....	11,721	231,870
White crystalline arsenic.....	788,650	797,101	Tubes, pipes and accessories..	48,146	230,426
Steam or external combustion motors.....	60,397	785,823	Iron spare parts for bicycles..	8,372	225,846
Milk skimming machines.....	37,540	750,650	Unspecified paper.....	88,854	223,824
Electric cables,— unspecified..	107,804	651,734	Machines for the dairy industry.....	9,154	199,134
Crepon paper and other crinkled paper.....	255,743	639,079	Manual tools and utensils for workshops.....	10,888	191,845
Calculating machines.....	4,313	630,921	Machines, apparatus and accessories,— unspecified.....	10,282	186,576
Chalk, plaster in bulk or prepared	1,625,929	594,170	Locks, padlocks, latches, etc..	56,217	173,895
Big steamers and sailing vessels	s/p	555,189	Hydraulic pumps.....	4,147	167,937
Steel hoops and strips.....	60,731	471,466	Steel bars and rods.....	27,922	146,374
Ituz process iron and steel....	127,406	413,912	Sundry items.....	3,320,195	5,172,638
Industrial machines, accessories and spare parts.....	22,583	369,617	TOTALS.....	90,142,553	117,034,250

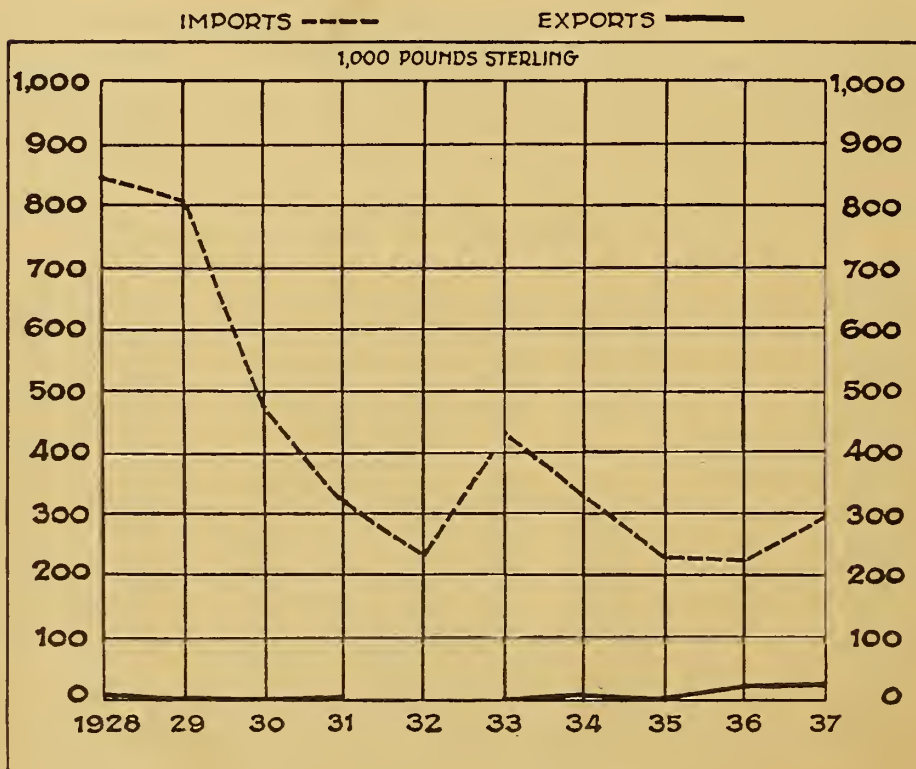
## Brazilian exports to Sweden

Coffee.....	28,464,600	89,374,810	Massaranduba rubber.....	6,175	25,156
Raw cotton.....	1,265,711	5,209,828	Brazil nuts.....	6,375	19,699
Cocoa.....	1,558,080	3,527,226	Dried ox hides.....	3,056	18,890
Oranges.....	3,054,910	1,991,125	Grape fruit.....	28,170	15,730
Preserved pork.....	467,865	1,589,742	Cocoa alimentary products....	3,540	13,350
Leaf tobacco.....	437,591	1,240,879	Bacon.....	3,146	13,216
Salted ox hides.....	219,919	946,709	Wood in bulk,— unspecified..	39,314	12,040
Cotton seed cakes.....	2,011,380	821,945	Jacarandá (wood).....	15,839	9,698
"Seringa" rubber from the States of Amazonas, Pará, the North of Mato Grosso and the Acre Territory.....	52,700	300,769	Unspecified skins.....	821	9,198
Chilled and frozen pork.....	106,028	296,898	Piassava fibre.....	4,072	9,000
Carnauba wax.....	23,719	280,740	Gonçalo-alves (wood).....	17,500	8,750
Wheat bran.....	787,500	234,600	Louro-vermelho (wood).....	26,500	6,625
Cotton linters.....	75,824	125,234	Dried and salted tripes.....	3,200	5,986
Paina (Brazilian vegetable down)	38,051	95,743	Peroba (wood).....	12,000	5,295
Coconut butter.....	10,080	74,389	Cocoa cakes.....	1,500	5,240
Prepared wood,— unspecified..	54,734	56,828	Horse cloth (made with sheep-skin).....	858	5,209
Ox hoof oil.....	18,684	44,416	Ipê (wood).....	36,778	5,070
Carnarinha.....	106,710	43,558	Mate,— "improved".....	3,510	3,986
Cigars.....	2,155	40,484	Timbó powder.....	500	3,701
Preserved meat.....	29,029	39,878	Pineapples.....	2,000	2,200
Comfits.....	12,030	36,320	Cabreúva (wood).....	3,155	822
Coquirana rubber.....	9,465	32,169	Preserved edibles,— unspecified.....	62	150
Cotton waste.....	16,920	32,000	Articles for museums.....	25	100
Sheep skins.....	4,352	29,278	TOTALS.....	39,045,933	106,664,679

## BRAZILIAN TRADE WITH SWITZERLAND

Importation and exportation during the 1918-1937 period

YEARS	VALUE (in pounds sterling)			INDEX NUMBERS	
	Brazilian Imports	Brazilian exports	Difference	Imports	Exports
1918.....	407,850	4,417	403,433	100	100
1919.....	415,621	—	415,621	102	—
1920.....	1,480,840	272	1,480,568	363	6
1921.....	595,840	3,268	592,572	146	74
1922.....	501,389	—	501,389	123	—
1923.....	533,747	2,938	530,809	131	66
1924.....	734,650	—	734,650	180	—
1925.....	751,484	699	750,785	184	16
1926.....	816,283	3,065	813,218	200	69
1927.....	928,795	22,039	906,756	228	499
1928.....	948,890	3,651	945,239	233	83
1929.....	807,401	608	806,793	198	14
1930.....	479,580	41	479,639	118	1
1931.....	323,691	732	322,959	79	17
1932.....	230,255	—	230,255	56	—
1933.....	435,147	731	434,416	107	16
1934.....	324,702	3,579	321,123	80	81
1935.....	234,332	1,372	232,960	57	31
1936.....	228,905	20,567	208,338	56	466
1937.....	296,424	25,553	270,871	73	678



## Importation and exportation by commodity in 1937

MERCHANDISE	QUANTITY (kilos)	VALUE (milréis)	MERCHANDISE	QUANTITY (kilos)	VALUE (milréis)
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## Brazilian imports from Switzerland

Aniline dyes.....	72,349	5,121,517	Products for medicinal and other uses.....	9,168	201,133
Spinning and weaving machines, —unspecified.....	437,766	4,568,145	Pumps, — unspecified and air compressors.....	16,281	195,384
Silk yarn for weaving purposes.....	22,808	2,106,941	Steam engines and external combustion motors.....	4,882	189,249
Artificial or vegetable silk thread for weaving purposes.....	85,781	1,959,057	Cheese.....	13,762	182,204
Wrist and pocket watches.....	1,747	1,863,837	Material and accessories for unspecified installations.....	6,832	178,798
Medicinal injections.....	4,209	1,556,172	Products of unspecified abrasive minerals.....	18,950	175,279
White textiles.....	19,201	1,340,636	Pure linen textiles,—unspecified.....	2,581	171,282
Capsules for medicinal use.....	2,797	1,274,884	Instruments, apparatus and machines for laboratories...	11,303	169,087
Medicinal drugs,—unspecified..	30,815	1,186,289	Aluminium in bulk.....	17,970	168,140
Internal combustion motors....	83,988	1,155,475	Preparations based on colophony, pitch or tar.....	21,404	168,057
Electric dynamos and generators with motors.....	65,075	877,090	Electrical gas or petrol refrigerators.....	13,363	167,773
Electric motors and accessories..	61,074	818,022	Intermediary substances for the manufacture of aniline dyes..	4,272	165,077
Artificial essences.....	1,690	758,520	Motors for automobiles (Motorcars).....	2,957	162,617
Typewriters.....	10,875	748,507	Tubes, pipes and accessories...	29,333	149,370
Dyed or coloured textiles.....	8,618	708,774	Natural silk yarn.....	3,998	142,929
Manufactured goods,—unspecified.....	13,217	631,864	Chemical products,—unspecified,—for industrial purposes	52,480	140,187
Accessories for spinning machines.....	18,236	508,072	Motive power machines and water turbines.....	23,446	138,008
Electric elevators and accessories	31,781	442,424	Colloidal metals and metalloids	9,400	133,912
Enamel for metals, casings and metal ribbons.....	142,200	429,661	Unspecified textiles.....	284	126,130
Electric transformers.....	61,907	424,232	Special apolios for the weaving industry.....	7,367	122,349
Apparatus and instruments for engineering purposes.....	4,454	390,968	Cotton textiles,—unspecified..	825	121,117
Various chemical organic products.....	699	363,049	Synthetic perfumes and odour chemical products.....	1,546	118,894
Bovine cattle for breeding purposes.....	19,600	358,024	Clocks and watches,—unspecified.....	486	105,097
Medicinal drops.....	824	324,260	Sundry items.....	358,863	3,207,621
Spare parts and accessories for spinning machines.....	12,473	312,443	TOTALS.....	1,904,914	38,669,854
Hydraulic pumps.....	20,992	300,535			
Fancy textiles.....	2,013	300,485			
Machines and accessories for unspecified industries.....	17,117	277,916			
Prepared edible meals.....	12,781	268,980			
Calculating machines.....	1,456	249,003			
Electric measuring appliances	4,618	244,378			

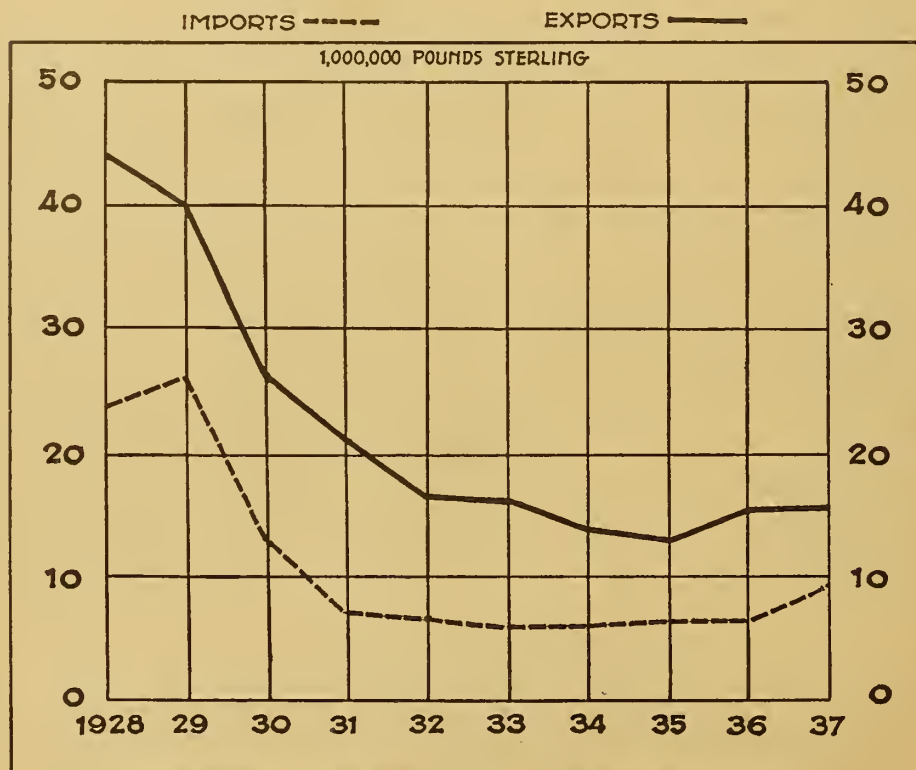
## Brazilian exports to Switzerland

Coffee.....	957,780	2,922,801	Precious stones, — unspecified.	s/p	18,192
Raw cotton.....	25,738	120,835	Dried and salted tripes.....	2,483	4,966
Paina (Brazilian vegetable down)	24,752	52,200	TOTALS.....	1,010,753	3,118,994

## BRAZILIAN TRADE WITH UNITED STATES

Importation and exportation during the 1918-1937 period

YEARS	VALUE (in pounds sterling)			INDEX NUMBERS	
	Brazilian imports	Brazilian exports	Difference	Imports	Exports
1918.....	18,984,413	21,267,015	2,302,602	100	100
1919.....	37,412,191	54,079,947	16,667,756	197	254
1920.....	51,939,093	44,987,187	6,951,906	274	211
1921.....	19,147,865	21,664,607	2,516,742	101	102
1922.....	11,081,624	26,456,544	15,374,920	58	124
1923.....	11,238,827	30,292,731	19,053,904	59	142
1924.....	16,543,809	40,808,915	24,265,106	87	192
1925.....	20,771,604	46,467,925	25,696,321	109	218
1926.....	23,308,962	45,103,290	21,794,328	123	212
1927.....	22,843,375	40,981,998	18,138,623	120	192
1928.....	24,089,750	44,278,917	20,189,167	127	208
1929.....	26,113,948	40,034,071	13,920,123	137	188
1930.....	12,956,468	26,523,271	13,566,803	68	125
1931.....	7,189,996	21,613,193	14,423,197	38	101
1932.....	6,566,268	16,788,826	10,222,558	35	79
1933.....	5,957,764	16,716,360	10,758,596	31	78
1934.....	6,027,001	13,800,788	7,773,787	32	65
1935.....	6,406,277	13,018,434	6,612,157	34	61
1936.....	6,651,129	15,179,790	8,528,661	35	71
1937.....	9,336,999	15,392,517	6,055,518	49	72





## Importation and exportation by commodity in 1937

MERCHANDISE	QUANTITY (kilos)	VALUE (milréis)	MERCHANDISE	QUANTITY (kiloe)	VALUE (milréis)
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## Brazilian imports from United States

Automobiles (Motor-cars).....	18,771,000	126,426,274	Printing machines and accessories.....	224,933	8,042,596
Chassis for lorries (trucks).....	15,637,500	96,036,855	Apparatus and accessories for telegraphic installations.....	117,864	7,522,913
Gasolene.....	131,812,000	63,796,596	Wheat flour.....	5,846,000	7,421,754
Laminated tin plates.....	30,832,880	59,599,381	Material, spare parts and accessories for electric light and power installations.....	316,676	7,085,880
Kerosene.....	69,441,000	48,591,300	Barbed wire.....	5,186,895	7,054,911
Mineral oils for lubricating purposes.....	35,623,689	41,964,183	Radio accessories.....	143,889	6,769,866
Gasolene in drums, cans and other containers.....	35,424,280	35,896,210	Industrial machinery and accessories.....	481,607	6,714,549
Radio apparatuses.....	716,513	32,195,563	Oil extracting and refining machines.....	721,345	6,477,363
Sheet iron.....	16,454,995	20,365,785	Caustic soda.....	8,535,249	6,451,686
Inter-connection pieces for railroads and street railways.....	21,950,360	20,187,774	Electric transformers.....	422,721	6,354,250
Petrol, gas and electric refrigerators.....	1,468,696	19,836,637	Motors for automobiles (Motor-cars).....	380,725	6,337,988
Pitch of black resin and other pine resins.....	12,386,405	19,341,145	Steel plates, etc.....	3,886,831	6,237,203
Accessories and spare parts for automobiles (Motor-cars).....	1,629,875	17,827,890	Pears.....	2,128,465	5,630,689
Wheat.....	20,085,000	17,097,512	Fare registers for vehicles.....	129,085	5,279,201
Coal, including anthracite.....	141,309,000	16,740,763	Silk thread for weaving purposes.....	49,147	5,155,672
Calculating machines.....	109,080	13,500,523	Electric elevators and accessories.....	305,372	4,815,994
Laminated or hammered copper	2,378,162	13,431,885	Cinematographic films.....	30,182	4,639,064
Typewriters.....	213,510	13,085,652	Galvanized iron plates.....	2,824,052	4,508,736
Agricultural tractors and spare parts for same.....	1,515,908	12,603,168	Sewing machines.....	187,523	4,449,954
Electric dynamoe and generators.....	776,300	11,884,491	Machinee and apparatus for technical uses.....	208,396	4,356,468
Aeroplanes.....	41,000	11,399,258	Drums to be used as containers for liquids etc.....	2,115,464	4,327,852
Iron and steel wire.....	9,034,232	11,002,866	Radio valves.....	23,976	4,291,469
Machines and accessories to improve cotton.....	1,000,426	10,943,258	Pumps and air compressors.....	370,032	4,175,274
Pneumatic tires (Rubber tires).....	914,405	10,085,750	Photographic plates and films.....	68,148	4,162,297
Tubes, pipes and accessories.....	3,659,640	9,910,856	Spare parts and accessories for building purposes in general.....	2,527,354	4,095,669
Ploughs.....	2,179,328	9,078,343	Sundry items.....	82,534,888	297,880,361
Tools and utensils for work-chops.....	479,699	8,837,347			
Lead in bulk.....	4,235,902	8,491,408			
Apples.....	3,478,733	8,105,117			
			TOTALS.....	703,376,337	1,228,503,459

## Brazilian exports to United States

Coffee.....	395,405,280	1,180,843,291	Piassava.....	721,734	1,335,305
Cocoa.....	85,281,043	183,392,983	Coquirana rubber.....	238,310	1,282,089
Castor beans.....	64,518,720	49,188,247	Mica.....	136,748	1,060,713
Babassú nuts.....	21,940,198	39,532,871	Dried and crushed blood.....	1,440,699	1,014,805
Cotton—seed oil.....	19,563,969	37,250,444	Grease.....	501,512	1,003,708
Goat skins.....	2,242,503	36,133,799	Crystal.....	17,421	964,367
Shelled Brazil nuts.....	3,088,136	27,696,155	Copaiba oil.....	103,195	744,311
Manganese.....	148,704	25,820,970	Babassú oil.....	207,926	640,447
Brazil nuts.....	5,682,372	21,173,510	Dried and salted tripes.....	349,742	632,531
"Seringa" rubber.....	4,037,787	20,412,753	Rutile ore.....	555,021	526,229
Preserved meat.....	6,753,958	16,749,667	Glycerine.....	76,210	511,977
Unspecified skins.....	607,359	11,714,723	Bones.....	1,059,855	500,019
Sheep skins.....	850,787	10,843,015	Ucuúba tallow.....	212,190	477,968
Raw cotton.....	2,118,777	10,511,375	Pine (wood).....	1,749,525	450,622
Wild boar skins.....	355,058	7,891,683	Stearine oil.....	209,875	434,419
Wheat bran.....	20,680,153	6,522,161	Caroá fibres.....	260,684	334,180
Tucum nuts.....	4,373,728	5,353,474	Horse hair.....	33,982	328,873
Urucuri.....	3,218,680	5,202,446	Andiroba oil.....	141,816	290,531
Deer skins.....	300,085	4,675,265	Timbó roots.....	77,691	276,379
Linters.....	2,359,490	4,074,730	Sorb rubber.....	65,848	252,950
Timbó (powder).....	564,077	3,179,728	Zircon ore.....	626,580	252,613
Cumarú peas.....	139,918	2,788,828	Maize.....	555,000	244,194
Oiticica oil.....	1,133,981	2,608,343	Dendé nuts.....	194,450	211,086
Cotton waste.....	1,193,920	1,950,607	Medicines.....	1,536	204,768
Animal fertilizers.....	3,383,433	1,594,369	Sundry items.....	173,743,381	115,245,265
Murumuri.....	1,987,517	1,592,277			
Aguano (wood).....	5,283,955	1,537,357			
Massaranduba rubber.....	261,851	1,340,645			
			TOTALS.....	840,756,840	1,850,796,363

BRAZILIAN TRADE WITH URUGUAY

Importation and exportation during the 1918-1937 period

YEARS	VALUE (in pounds sterling)			INDEX NUMBERS	
	Brazilian imports	Brazilian exports	Difference	Imports	Exports
1918.....	2,208,341	6,362,338	4,153,997	100	100
1919.....	1,741,645	5,708,210	3,966,565	79	90
1920.....	1,681,969	4,778,021	3,096,052	76	75
1921.....	828,255	3,341,572	2,513,317	37	52
1922.....	746,827	2,447,206	1,700,379	33	38
1923.....	302,662	2,402,039	2,099,377	14	38
1924.....	1,134,015	2,730,237	1,596,222	51	43
1925.....	846,373	2,426,348	1,579,975	38	38
1926.....	681,316	2,687,905	2,006,289	31	42
1927.....	744,437	2,436,826	1,692,389	34	38
1928.....	996,290	2,525,507	1,529,217	45	40
1929.....	693,411	2,908,316	2,214,905	31	46
1930.....	700,469	3,323,627	2,623,158	32	52
1931.....	161,033	1,864,901	1,703,868	7	29
1932.....	132,051	1,328,341	1,196,290	6	21
1933.....	104,134	1,168,409	1,064,275	5	18
1934.....	175,715	1,055,264	879,549	8	17
1935.....	161,146	857,394	696,248	7	13
1936.....	196,417	763,541	667,124	9	12
1937.....	99,253	783,512	684,259	4	12



## Importation and exportation by merchandise in 1937

MERCHANDISE	QUANTITY (kilos)	VALUE (milréis)	MERCHANDISE	QUANTITY (kilos)	VALUE (milréis)
Wheat flour.....	3,691,000	2,911,120	Iron and steel wire.....	13,500	26,233
Mineral oil for combustion purposes.....	9,153,000	2,211,706	Seeds for planting purposes...	24,300	24,132
Jerked beef.....	470,547	1,387,851	Tools and utensils for machines.....	1,113	22,720
Bovine cattle for breeding purposes.....	278,800	705,937	Grease, lubricating substance, etc.....	8,040	21,352
Sheep for breeding purposes.....	160,250	622,486	Medicinal injections.....	13	20,646
Tin in bulk.....	32,781	595,087	Fresh fruits,—unspecified.....	12,576	20,398
Gasoline in drums, cans and other containers.....	440,900	557,024	Marble, alabaster, and porphyry.....	35,598	19,033
Equine cattle for breeding purposes.....	19,500	439,726	Wool in bulk, carded, etc.....	1,833	18,840
Laminated tin plates.....	192,035	382,735	Caustic soda.....	25,176	18,597
Preserved meat and meat extracts.....	10,770	333,212	Cbalk, plaster in bulk or prepared.....	29,775	18,271
Flax seeds for industrial purposes.....	596,900	269,843	Anti-parasitic preparations and other insect exterminators.....	5,033	16,015
Unspecified mills.....	57,898	266,978	Gasolene.....	10,000	15,575
Garlic.....	158,525	210,738	Prepared dyes.....	4,154	14,143
Drums to be used as containers.....	148,223	180,310	Windmills.....	2,442	14,127
Coal including anthracite.....	687,000	162,503	Mineral oils for lubrication purposes.....	5,984	14,073
Boilers and accessories for steam engines.....	21,000	97,537	Pitch and other pine resins.....	11,430	14,038
Woollen waste,—including tow.....	31,088	86,374	Refined salt for cooking purposes.....	60,000	12,050
Locomotives.....	70,000	78,349	Automobiles.....	1,500	11,248
Giblets, etc.....	4,185	57,623	Staves and boops.....	4,062	10,389
Industrial machinery and accessories.....	8,662	54,771	Silver mounted goods with bone and ivory incrustations.....	180	9,998
Tow waste.....	20,150	54,527	Agricultural tractors and spare parts.....	3,000	9,543
Oats.....	13,000	45,674	Dried fruits,—unspecified.....	1,770	9,424
Vegetable or artificial silk yarn for weaving purposes.....	1,583	38,514	Unspecified varnishes.....	1,200	8,595
Kerosene.....	30,000	37,843	Unspecified bovine cattle.....	6,500	8,125
Spare parts and accessories for electric light and power installations.....	1,302	36,301	Sundry items.....	1,230,133	882,875
Skins, and hides,—varnished and dyed.....	254	33,989	TOTALS.....	17,798,965	13,124,198

## Brazilian exports to Uruguay

Mate,—“improved”.....	18,164,669	21,525,329	Ipê (wood).....	1,229,973	189,079
Preserved meat.....	11,342,490	18,858,217	Brown sugar.....	192,000	180,045
Salted ox hides.....	3,081,493	11,389,354	Horns.....	79,760	170,747
Coffee.....	2,153,709	5,661,586	Cedar (wood).....	328,090	138,400
Frozen meat.....	3,710,403	5,340,408	Tobacco.....	31,402	130,311
Mate (scored).....	3,928,171	3,409,536	Horse hair.....	14,407	125,494
Grease.....	1,453,214	2,698,022	Medicines.....	16,827	125,166
Tallow.....	1,623,931	2,378,076	Glandules.....	37,439	124,800
Leaf tobacco.....	974,025	2,209,061	Cotton thread for sewing purposes.....	8,071	123,996
Bananas.....	15,519,580	1,918,785	Sheep skins.....	21,695	113,350
Pine (wood).....	7,040,388	1,652,199	Wood in bulk,—unspecified.....	563,078	101,314
Meat extract.....	307,160	1,535,300	Prepared wood.....	139,960	99,554
Dried ox hides.....	351,827	1,523,721	Cigars and cigarettes.....	3,795	92,373
Cocoa.....	582,000	1,355,044	Animal fertilizers.....	372,460	91,662
Bones.....	3,376,922	1,297,901	Dye powder.....	106,710	88,477
Chilled and frozen giblets.....	717,134	1,268,972	Piassava.....	66,427	76,349
Chilled meat.....	799,914	1,076,781	Perfumes.....	7,060	71,981
Preserved tongues.....	146,997	687,840	Potatoes.....	137,760	70,961
Dried and salted tripes.....	322,736	650,378	“Seringa” rubber from the States of Amazonas, Para, the North of Mato Grosso and the Acre Territory.....	11,500	54,521
Carnarinha.....	1,407,024	446,332	Comfits.....	22,480	53,702
Jerked beef.....	168,503	422,248	White metal manufactured goods.....	1,182	52,208
Frozen mutton.....	226,821	390,802	Claws or nails.....	118,338	40,905
Rice in bulk.....	533,921	342,751	Sundry items.....	1,056,872	663,068
Manioca flour.....	712,350	337,483	TOTALS.....	84,369,738	92,590,587
Dried and crushed blood.....	554,100	304,755			
Pineapples.....	401,930	253,356			
Unspecified skins.....	16,614	239,161			
Twist tobacco.....	87,339	227,978			
Ox hoof oil.....	87,116	210,748			





# *FINANCE*



## INTRODUCTORY

THE Brazilian Government has, since 1930, been engaged in a decisive development of a more uniform and harmonious action towards public affairs. This chiefly with a view to establishing means of procedure capable of eliminating the dispersion till then prevailing in the administrative, economical and financial order of the Union, States and Municipalities.

To carry out such a policy, decree N. 19,398 was issued on the 11th November, 1930, in order to set up the organic and general lines of the new régime then in force. And as a consequence thereof, decree N. 20,348, of 29th August, 1931, followed to create the Advisory Councils in the States, Federal District and Municipalities, and to outline the methods as regards local public administrations.

As these provisions were instituted in the administrative order, decree 20,631 still of 1931 was published to supplement the organization of the financial machine under a more comprehensive scope, in which the establishment of a Committee of Financial and Economical Survey of the States and Municipalities was included. By extending the grounds on which its services were based the Committee entrusted one of its operating organs with the duty of studying the state and municipal economical and financial conditions, whereas upon another it was conferred the task of bringing together and co-ordinating all the data about the external debts of the various public units of the Federation.

It was possible thus to make a complete and ample survey of the financial situation of the Union, States and Municipalities, and to determine in detail the general public debts of the country, either external or internal debts, the latter being discriminately stated as to whether consolidated or fluctuating. This afforded an interesting insight into our public finances as a whole, and made feasible some formerly unattainable and even unattempted comparisons.

With the purpose of giving greater uniformity to the administrative action of the State and municipal governments regarding the financial affairs and, particularly, the preparation and carrying out of the budgetary statements, various rules were fixed among which the following may be pointed out:

a) that the revenue should not be estimated at an amount higher than that actually collected in the previous financial year and should take no account of collection from loans or from any other extraordinary resources whatsoever;

b) that expenditures authorized by budgetary laws of the States and Municipalities should not exceed the revenue estimated for the financial year and that, supplementary, extraordinary or special appropriations should not surpass the balance of the collected revenue over the estimated revenue;

c) that the States or Municipalities should not contract loans abroad.

Within the same objective, a useful effort was developed in order to improve our budgetary technique, and a more orderly and more consentaneous classification of revenue and expenditure was adopted. We have had, in this way, a public revenue distributed in three great categories: "Ordinary Revenue", "Extraordinary Revenue" and "Revenue with Special Application", there being abolished the interstate duties so prejudicial to the expansion of internal trade. As regards the expenditure, various steps were likewise taken making possible the ready knowledge of ways and means whereby public revenues are utilized.

Later, some modifications occurred in the services of aforesaid Commission. The Government, lastly, by decree N. 14, of 25th November, 1937, instituted the Technical Council of Economy and Finances, which, as a special consulting organ, was charged with the attribution of studying the matters both of economical and financial nature either concerning the Union, States or Municipalities, and to advise on all such matters.

The functions formerly vested in the Commission of Financial and Economical Studies were assigned to the Technical Secretariat of said Council.

These reforms having been introduced into Brazilian finances and the controlling fiscal organization being similarly improved, the Government succeeded in bringing about an ever-increasing collection, whose totals express thoroughly not only our economical recovery but also the excellence and perfection of our taxation system.

By endeavouring to normalize the external obligations of the country, the Government promoted, through the competent organs, the necessary arrangements with the representatives of our various creditors abroad. As a result thereof, a financial readjustment was officially sanctioned and published under Decree N. 23,829, of 5th February, 1934.

Accordingly, the payment of our external obligations was resumed and corresponding remittances were made until it became entirely impossible to meet the sinking of such indebtedness on account of the powerful and irremovable circumstance of our not having the resources demanded for such a purpose. Consequently, payments stipulated have not been met according to the arrangements arrived at in 1934. Such a deferment, however, implies solely an emergency measure of a provisional character, the Government continuing to be desirous of examining, together with the concerned parties, any sinking scheme which, while beneficial to our creditors, may not oppose to the interests of national economy.

The drop of coffee prices, our staple export product, has resulted in a significant reduction in the surplus of our trade. A new route for the coffee policy was then felt imperative. This considered the relation existing between the gold price of coffee and the greater or smaller availableness of foreign currency in our exchange market, as well as the adoption of measures tending to preserve the monetary values from sudden oscillations, circumstances which led the Government to control said market.



On the other hand, the fostering and the development of other sources of wealth were pursued in the system of the national production, whereby cotton took a very prominent place among the other staple products ranking high in the statistical records of our exportation.

Through the intensification of our trade interchange and by carrying out the aforesaid measures, the economical and financial situation of the country is being greatly improved, heavy external obligations having already been liquidated. Among these may be mentioned the instalments paid in relation to commercial arrears, those referring to the re-organization and equipment of our industrial centres and those for the purchase of material connected with the interests of the national defense.

By the foregoing it will be seen that the Government is conducting its financial policy within two great controlling lines; on the one hand, the rationalization of our public budgets was sought and, concomitantly, methods of levying duties and collecting the revenue were improved; on the other hand, means for intensifying our trade interchange abroad were promoted, and the measures felt necessary to protect our monetary system were made effective, in order to prevent its value from abrupt oscillations which always impair so much the relations of external trade.

### BUDGET OF BRAZIL

a) — Estimated revenue

DESIGNATION		FINANCIAL YEARS (contos of réis)		ABSOLUTE AND RELATIVE DIFFERENCE IN 1939	
		1938	1939	Contos of réis	%
Ordinary revenue	I — Revenue from taxes:				
	a) Customs duties.....	1,329,700	1,330,000	+ 300	+ 0.02
	b) Excise Tax.....	848,110	1,010,200	+ 162,090	+ 19.1
	c) Income Tax.....	308,500	332,500	+ 24,000	+ 7.8
	d) Tax of Governmental acts (1)....	268,120	277,950	+ 9,830	+ 3.7
	e) Revenue in territories.....	100	200	+ 100	+ 100.0
	TOTAL REVENUE FROM TAXES	2,754,530	2,950,850	+ 196,320	+ 7.1
	II — Revenue from State Property.....	30,643	37,383	+ 6,740	+ 22.0
	III — Industrial Revenue.....	427,987	467,992	+ 40,005	+ 9.3
	IV — Miscellaneous sources of Revenue...	203,195	188,500	— 14,695	— 7.2
	ORDINARY REVENUE TOTAL.....	3,416,355	3,644,725	+ 228,370	+ 6.7
Extraordinary revenue.....		407,268	426,244	+ 18,976	+ 6.5
GRAND TOTAL OF REVENUE.....		3,823,623	4,070,969	+ 247,346	+ 6.5

(1) Until 1936, inclusive, "Tax on circulation"

## BUDGET OF BRAZIL

b) — Estimated expenditure

DESIGNATION		FINANCIAL YEARS (Contos of réls)		ABSOLUTE AND RELATIVE DIFFERENCE IN 1939	
		1938	1939	Contos of réls	%
According to the di- vision of the Ge- neral Ad- ministra- tion	Presidency of the Republic and official en- tities directly subordinate to same (1)...	6,597	19,530	+ 12,933	+ 196.0
	Ministries:				
	Finance.....	(2) 1,228,123	(2) 1,238,744	+ 10,621	+ 0.9
	Justice and Internal Affairs.....	146,830	148,311	+ 1,481	+ 1.0
	Foreign Affairs.....	50,952	60,811	+ 9,859	+ 19.3
	Education and Public Health.....	280,951	305,673	+ 24,722	+ 8.8
	Labor, Industry and Commerce.....	68,665	112,175	+ 43,510	+ 63.4
	Communications and Public Works.....	931,698	994,617	+ 62,919	+ 6.8
	Marine (Navy Department).....	300,255	297,561	— 2,694	— 0.9
	War.....	738,503	760,699	+ 22,196	+ 3.0
According to the budget items	Agriculture.....	122,652	127,378	+ 4,726	+ 3.9
	TOTALS.....	3,875,226	4,065,499	+ 190,273	+ 4.9
	Staff.....	1,683,766	1,772,211	+ 88,445	+ 5.3
	Material.....	494,151	588,820	+ 94,669	+ 19.2
	Services and commissions.....	420,396	516,077	+ 95,681	+ 22.8
	Eventual expenditures.....	4,115	4,121	+ 6	+ 0.1
	Public works, improvements, and equip- ment.....	370,193	297,409	— 72,784	— 19.7
	Public debt.....	902,605	886,861	— 15,744	— 1.7
	TOTALS.....	3,875,226	4,065,499	+ 190,273	+ 4.9
	Deficit or surplus foreseen.....	— 451,603	+ 5,470	...	...

(1) Including the following official entities: "Public Service Administrative Department", "Brazilian Institute of Geography and Statistics", "Federal Council of External Trade", "Council of Immigration and Colonization", "National Petroleum Council" and the "Council of National Safety".

(2) Including the external and internal Debt Service.

## FEDERAL REVENUES DURING THE 1846-1937 PERIOD

FINANCIAL YEARS	Contos of réls	FINANCIAL YEARS	Contos of réls
1846/1847 (1).....	27,628	1863/1864.....	54,801
1847/1848.....	24,732	1864/1865.....	56,996
1848/1849.....	26,163	1865/1866.....	58,523
1849/1850.....	28,200	1866/1867.....	64,777
1850/1851.....	32,697	1867/1868.....	71,201
1851/1852.....	37,713	1868/1869.....	87,543
1852/1853.....	38,103	1869/1870.....	94,847
1853/1854.....	34,516	1870/1871.....	95,885
1854/1855.....	35,985	1871/1872.....	102,337
1855/1856.....	38,634	1872/1873.....	110,713
1856/1857.....	49,156	1873/1874.....	102,652
1857/1858.....	49,747	1874/1875.....	104,707
1858/1859.....	46,920	1875/1876.....	100,718
1859/1860.....	43,807	1876/1877.....	98,970
1860/1861.....	50,052	1877/1878.....	109,221
1861/1862.....	52,489	1878/1879.....	111,802
1862/1863.....	48,342	1879/1880.....	120,393

(1) Pursuant to provisions of Decree issued on October 8, 1828, the financial year thereafter commenced to be counted as from July of one year, to June 30 of the following year.

## FEDERAL REVENUES DURING THE 1846-1937 PERIOD

FINANCIAL YEARS	Contos of réis	FINANCIAL YEARS	Contos of réis
1880/1881.....	128,364	1910.....	524,819
1881/1882.....	130,456	1911.....	563,549
1882/1883.....	129,698	1912.....	615,391
1883/1884.....	132,593	1913.....	654,391
1884/1885.....	121,974	1914.....	423,252
1885/1886.....	126,883	1915.....	404,278
1886/1887.....	218,763	1916.....	477,897
1888 (1).....	150,726	1917.....	537,441
1889.....	160,840	1918.....	618,830
1890.....	195,253	1919.....	625,693
1891.....	228,945	1920.....	922,259
1892.....	227,608	1921.....	891,001
1893.....	259,851	1922.....	972,179
1894.....	265,057	1923.....	1,258,132
1895.....	307,755	1924.....	1,539,187
1896.....	346,213	1925.....	1,741,834
1897.....	303,411	1926.....	1,647,889
1898.....	324,053	1927.....	2,039,506
1899.....	320,837	1928.....	2,216,513
1900.....	307,915	1929.....	2,201,246
1901.....	304,512	1930.....	1,677,952
1902.....	343,814	1931.....	1,752,665
1903.....	415,375	1932.....	1,750,790
1904.....	442,770	1933.....	2,078,476
1905.....	401,025	1934.....	2,519,530
1906.....	431,685	1935.....	2,722,693
1907.....	536,060	1936.....	3,127,480
1908.....	441,259	1937.....	3,462,476
1909.....	452,726		

(1) The coincidence of the financial and civil years reestablished in 1888, which caused the second half-year term of 1887 to be included in that of the preceding year.

FEDERAL REVENUES AND DISBURSEMENTS DURING THE  
1935 - 1937 PERIOD

FEDERATED UNITS	REVENUES (contos of réis)			DISBURSEMENTS (contos of réis)		
	1935	1936	1937	1935	1936	1937
Amazonas (1).....	8,577	10,342	13,286	7,008	9,401	12,367
Pará.....	21,466	22,811	27,788	7,135	10,308	22,995
Maranhão.....	12,019	13,502	13,737	9,126	12,086	14,392
Piauí.....	4,963	5,985	7,124	5,351	6,728	7,908
Ceará.....	37,753	37,236	40,154	18,400	24,634	34,537
Rio Grande do Norte.....	12,079	10,553	11,257	7,771	10,210	11,189
Paraíba.....	19,415	18,018	19,990	5,966	8,321	9,175
Pernambuco.....	93,278	90,953	95,303	16,444	22,185	32,102
Alagoas.....	13,171	11,301	10,858	4,513	6,266	6,956
Sergipe.....	7,594	7,465	7,614	4,355	6,793	6,875
Baía.....	60,628	75,289	86,031	23,075	50,303	74,932
Espírito Santo.....	7,777	6,291	7,963	3,196	5,002	5,934
Rio de Janeiro.....	58,477	62,867	68,294	11,915	23,960	20,499
Federal District (2).....	1,237,986	1,604,236	1,689,975	2,603,779	2,821,653	3,642,323
São Paulo.....	870,442	889,588	1,066,488	70,032	104,322	120,917
Paraná.....	31,796	32,249	35,373	13,101	12,128	13,242
Santa Catarina.....	26,486	26,231	30,651	9,438	15,450	16,144
Rio Grande do Sul.....	134,669	138,784	168,625	26,865	33,721	41,048
Mato Grosso.....	5,194	5,547	5,784	3,748	6,315	6,889
Goiás.....	2,027	2,184	2,562	2,189	3,479	3,679
Minas Gerais.....	56,896	56,048	63,619	18,594	32,816	39,356
TOTALS.....	2,722,693	3,127,460	3,462,476	2,872,001	3,226,081	4,143,959

(1) Including the Territory of Acre.

(2) Including the Brazilian Treasury Delegation in London.



# STATE REVENUES AND DISBURSEMENTS DURING THE 1935-1937 PERIOD

FEDERATED UNITS	REVENUES (contos of réis)			DISBURSEMENTS (contos of réis)		
	1935	1936	1937	1935	1936	1937
Amazonas.....	15,263	17,083	17,359	15,066	16,624	17,350
Pará.....	27,732	32,397	23,377	28,387	31,677	28,862
Maranhão.....	13,374	20,132	22,730	13,368	18,179	21,703
Piauí.....	10,431	13,916	15,259	10,518	12,296	14,540
Ceará.....	22,978	29,515	30,853	21,479	29,386	35,995
Rio Grande do Norte.....	19,457	17,687	24,727	18,078	21,162	24,570
Paraíba.....	26,348	28,373	31,646	21,070	28,264	34,853
Pernambuco.....	79,441	88,262	80,437	76,657	84,938	88,158
Alagoas.....	16,084	13,998	14,387	14,871	15,530	15,223
Sergipe.....	12,734	13,915	15,319	11,820	13,420	15,527
Baía.....	78,885	106,736	116,763	75,686	85,801	113,693
Espírito Santo.....	63,346	60,435	52,800	59,392	60,333	60,896
Rio de Janeiro.....	62,452	65,388	59,472	58,491	76,599	68,349
São Paulo.....	657,142	703,590	(1) 680,693	745,583	747,458	(1) 816,722
Paraná.....	44,963	52,597	49,861	35,865	44,920	63,357
Santa Catarina.....	21,060	24,790	31,345	17,917	30,145	37,273
Rio Grande do Sul.....	193,254	230,757	255,163	184,899	209,793	243,021
Mato Grosso.....	8,152	13,781	13,496	10,830	9,831	11,074
Goiás.....	9,600	12,478	(1) 13,241	10,847	13,209	(1) 13,241
Minas Gerais.....	245,000	268,495	264,815	328,000	337,831	334,769
TOTALS.....	1,627,726	1,814,325	(1) 1,818,743	1,758,624	1,887,396	(1) 2,059,188

(1) Figures subject to revision.

# MUNICIPAL REVENUES AND DISBURSEMENTS DURING THE 1935-1937 PERIOD

FEDERATED UNITS	REVENUES (contos of réis)			DISBURSEMENTS (contos of réis)		
	1935	1936	1937	1935	1936	1937
Territory of Acre.....	756	1,055	781	748	976	767
Amazonas.....	4,996	6,271	6,554	4,839	6,922	6,506
Pará.....	13,704	10,252	17,726	13,656	9,617	17,676
Maranhão.....	4,556	6,415	6,786	4,902	7,100	6,727
Piauí.....	3,219	5,534	3,754	3,296	5,332	3,723
Ceará.....	7,261	11,290	11,966	7,077	10,125	13,159
Rio Grande do Norte.....	4,199	5,265	5,533	4,751	5,707	5,493
Paraíba.....	5,410	7,285	7,273	5,277	6,974	7,293
Pernambuco.....	17,997	24,836	24,394	20,969	25,830	24,381
Alagoas.....	3,458	4,941	5,220	3,396	5,955	5,189
Sergipe.....	3,159	4,220	4,240	3,518	4,152	4,259
Baía.....	30,643	33,223	36,160	30,371	33,732	37,834
Espírito Santo.....	6,881	6,828	7,806	6,912	7,041	7,748
Rio de Janeiro.....	28,422	31,424	31,647	29,590	33,324	31,616
Federal District.....	286,434	286,726	316,388	299,648	305,948	339,592
São Paulo.....	152,462	240,657	115,081	150,416	234,787	114,816
Paraná.....	12,641	14,737	15,366	12,837	14,247	15,401
Santa Catarina.....	8,327	10,472	10,792	8,606	10,025	10,777
Rio Grande do Sul.....	93,874	99,607	139,635	95,833	97,161	144,801
Mato Grosso.....	3,828	4,109	4,694	3,760	4,013	4,747
Goiás.....	3,217	3,904	4,812	3,359	3,867	4,857
Minas Gerais.....	54,655	63,584	78,047	56,155	63,652	77,300
TOTALS.....	750,149	(1) 882,640	(2) 854,705	769,916	(1) 896,487	(2) 884,662

(1) Provisional figures.

(2) Budgetary figures.



# REVENUE AND DISBURSEMENTS OF THE UNION, FEDERATED UNITS AND MUNICIPALITIES DURING THE 1935-1937 PERIOD

FEDERATED UNITS	REVENUES (contos of réis)			DISBURSEMENTS (contos of réis)		
	1935	1936	1937	1935	1936	1937
Territory of Acre (1).....	756	1,055	781	748	976	767
Amazonas (2).....	28,836	33,696	37,199	26,913	32,947	36,223
Pará.....	62,902	65,460	73,891	49,178	51,602	69,533
Maranhão.....	29,949	40,049	43,253	27,396	37,255	42,827
Piauí.....	18,613	25,435	26,137	19,165	24,356	26,171
Ceará.....	67,992	78,041	82,973	46,956	64,145	83,691
Rio Grande do Norte.....	35,765	33,505	41,567	30,600	37,079	41,252
Paraíba.....	51,173	53,676	58,909	32,313	43,559	51,321
Pernambuco.....	190,716	204,051	200,134	114,070	132,953	144,641
Alagoas.....	32,713	30,240	30,465	22,780	27,751	27,368
Sergipe.....	23,487	25,600	27,173	19,693	24,365	26,661
Baía.....	170,156	215,233	238,954	129,132	169,836	226,464
Espírito Santo.....	78,004	73,554	68,569	70,000	72,376	74,578
Rio de Janeiro.....	149,351	159,679	159,413	99,996	133,883	120,464
Federal District (3).....	1,524,470	1,890,962	2,006,363	2,903,427	3,127,601	3,982,415
São Paulo.....	1,680,046	1,833,835	1,852,262	966,031	1,086,567	1,052,455
Paraná.....	89,400	99,583	100,600	61,803	71,235	92,000
Santa Catarina.....	55,873	61,493	72,788	35,961	55,620	64,194
Rio Grande do Sul.....	421,797	469,148	563,423	307,597	340,675	428,870
Mato Grosso.....	17,174	23,437	23,974	18,438	20,159	22,710
Goiás.....	14,844	18,566	20,615	15,595	20,555	21,777
Minas Gerais.....	356,561	388,127	406,481	402,749	434,299	451,425
TOTALS.....	5,100,578	(4) 5,824,425	(4) 6,135,924	5,400,541	(4) 6,009,864	(4) 7,087,807

- (1) Only Municipal revenues and disbursements.  
 (2) Including Federal revenues and disbursements in the Territory of Acre.  
 (3) Including Brazilian Treasury Delegation in London.  
 (4) Figures subject to revision.

## INTERNAL CONSOLIDATED DEBT OF THE UNION DURING THE 1928 - 1937 PERIOD

YEARS	AMOUNT (contos of réis)						
	4% Government securities	5% Government securities	Economic readjustment	Bolivian treaty	Treasury bonds	Railway bonds	Total
BALANCE IN CIRCULATION							
1928.....	120	2,166,413	—	1,629	117,260	107,090	2,459,195
1929.....	120	2,166,413	—	1,629	97,260	110,701	2,452,123
1930.....	—	2,164,783	—	1,629	155,801	135,701	2,533,914
1931.....	—	2,164,814	—	1,629	219,565	135,701	2,589,709
1932.....	—	2,164,686	—	1,629	656,454	125,328	3,016,097
1933.....	—	2,183,567	—	1,629	626,634	125,325	3,005,155
1934.....	—	2,181,414	—	1,629	626,634	125,325	3,003,002
1935.....	—	2,181,414	283,242	1,629	623,373	125,325	3,282,983
1936.....	—	2,188,082	498,883	1,629	623,373	125,325	3,505,292
1937.....	—	2,187,867	540,058	1,629	823,373	125,325	3,748,252
DEBT SERVICE							
1928.....	5	108,229	—	49	32,097	19,060	159,440
1929.....	5	108,321	—	49	28,208	20,496	164,413
1930.....	125	109,951	—	49	26,808	20,749	165,482
1931.....	—	108,239	—	49	30,906	9,499	160,493
1932.....	—	108,369	—	49	136,157	26,599	274,574
1933.....	—	108,234	—	49	76,952	8,776	197,411
1934.....	—	111,331	—	49	43,864	8,773	167,417
1935.....	—	109,177	41,667	49	43,864	8,773	206,930
1936.....	—	109,177	41,667	49	43,864	8,773	206,930
1937.....	—	109,070	24,167	49	43,636	8,773	189,095

## EXTERNAL DEBT OF THE UNION, STATES AND MUNICIPALITIES

Value of bonds in circulation — (31-VII-1937)

SPECIFICATION	AMOUNT				
	Pounds sterling	Dollars	Francs gold	Francs paper	Florins
Union.....	104,445,957	169,105,745	229,185,500	275,175,712	—
States.....	41,763,906	129,155,500	—	226,299,625	8,366,000
Municipalities.....	10,377,067	58,909,500	—	21,520,000	—
TOTALS.....	156,586,930	357,170,745	229,185,500	522,995,337	8,366,000

## Debt service during the 1928-1937 period

YEARS	Pounds sterling	Dollars	France paper	Florins
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## UNION

1928.....	7,051,598	13,056,416	17,443,350	—
1929.....	7,053,343	15,504,656	17,440,971	—
1930.....	7,055,159	14,810,014	58,788,555	—
1931.....	5,259,030	10,420,540	62,898,138	—
1932.....	1,419,849	218,943	3,218,441	—
1933.....	1,594,983	719,509	37,223,598	—
1934.....	2,196,160	2,768,837	121,912,909	—
1935.....	2,854,566	6,237,228	27,750,139	—
1936.....	3,206,735	6,712,049	30,982,403	—
1937.....	3,171,634	7,460,291	29,169,158	—

## STATES

1928.....	2,755,415	8,573,492	1,422,079	3,112,841
1929.....	2,900,011	9,803,244	264,000	2,973,959
1930.....	1,415,275	13,102,729	—	2,824,987
1931.....	4,894,280	15,359,746	—	2,677,514
1932.....	3,257,876	6,159,215	—	673,998
1933.....	3,113,064	4,651,410	—	—
1934.....	1,538,555	4,700,323	30,125	60,346
1935.....	1,717,383	4,910,470	415,656	148,914
1936.....	1,667,850	5,369,549	—	165,646
1937.....	1,888,772	6,509,900	—	207,476

## MUNICIPALITIES

1928.....	497,503	4,758,597	367,760	—
1929.....	527,373	5,988,054	—	—
1930.....	527,316	5,941,691	—	—
1931.....	211,137	4,459,623	—	—
1932.....	45,329	—	—	—
1933.....	—	—	—	—
1934.....	80,332	656,110	—	—
1935.....	74,539	873,185	—	—
1936.....	83,483	928,499	—	—
1937.....	199,428	1,182,796	—	—

## TOTALS

1928.....	10,304,516	26,388,505	19,233,189	3,112,841
1929.....	10,480,727	31,295,954	17,704,971	2,973,959
1930.....	11,997,750	33,854,434	58,788,555	2,824,987
1931.....	10,364,447	30,239,909	62,898,138	2,677,514
1932.....	4,723,054	6,378,158	3,218,441	673,998
1933.....	4,708,047	5,370,919	37,223,598	—
1934.....	3,815,047	8,125,270	121,943,034	60,346
1935.....	4,646,488	12,020,883	28,165,795	148,914
1936.....	4,958,068	13,010,097	30,982,403	165,646
1937.....	5,259,834	15,152,987	29,169,158	207,476

## MOVABLE BONDS DURING THE 1935-1937 PERIOD

## Government securities on the London Market

SPECIFICATION		YEARLY QUOTATIONS IN POUNDS STERLING		
		1935	1936	1937
Funding Loan — 1998 — 5%.....	Minimum.....	64.00	62.00	50.50
	Average.....	83.25	90.75	93.25
	Maximum.....	97.50	99.25	102.00
New Funding Loan — 1914 — 5%.....	Minimum.....	49.00	61.50	38.00
	Average.....	64.25	71.50	77.25
	Maximum.....	83.25	63.00	89.50
Changes — 1910 — 4%.....	Minimum.....	10.00	15.00	11.00
	Average.....	13.50	17.25	21.00
	Maximum.....	17.25	23.25	29.00
Funding Loan — 1931 — 5% — 40 years.....	Minimum.....	31.50	54.50	35.00
	Average.....	52.50	61.50	67.50
	Maximum.....	66.50	69.00	81.50

## Government securities on the New York Market

SPECIFICATION		YEARLY QUOTATIONS IN DOLLARS		
		1935	1936	1937
8% — 1921 — 41.....	Minimum.....	20.00	30.13	22.00
	Average.....	27.91	34.08	44.58
	Maximum.....	38.87	49.50	58.00
7% — 1922 — 52.....	Minimum.....	18.50	24.00	19.00
	Average.....	22.92	28.36	37.30
	Maximum.....	30.62	41.00	48.00
6 ½% — 1926 — 57.....	Minimum.....	18.00	23.50	19.25
	Average.....	22.23	27.88	37.34
	Maximum.....	31.50	40.00	47.50
6 ½% — 1927 — 57.....	Minimum.....	18.00	24.00	19.50
	Average.....	22.26	27.88	37.29
	Maximum.....	31.50	40.25	46.50

## Government securities and other Federal Bonds on the Rio de Janeiro Stock Exchange

SPECIFICATION		YEARLY AVERAGE QUOTATIONS IN MILREIS		
		1935	1936	1937
Government Securities	General Government Securities (uniform) 1:000\$ — 5% .....	800	770	795
	Loan of 1903 (bearer) 1:000\$ — 5% .....	780	735	797
	Bolivian Treaty (nominal) 1:000\$ — 3% .....	600	563	595
	Various issues (nominal) 1:000\$ — 5% .....	793	765	788
	Various issues (bearer) 1:000\$ — 5% .....	795	757	808
	Economic readjustment — 1:000\$ — 5% .....	684	663	759
Treasury Bonds	1921..... 1:000\$ — 7% .....	994	996	1,027
	1930..... 1:000\$ — 7% .....	995	1,007	1,035
	1932..... 1:000\$ — 7% .....	1,009	1,015	1,040
	1937..... 1:000\$ — 6% .....	—	—	900
Railway Bonds	1st Issue..... 1:000\$ — 7% .....	994	1,003	1,036
	2nd Issue..... 1:000\$ — 7% .....	993	933	1,045
	3rd Issue..... 1:000\$ — 7% .....	1,002	1,008	1,033
Highway Bonds	Nominal..... 1:000\$ — 7% .....	785	700	—
	Bearer..... 1:000\$ — 7% .....	730	735	766

## NATIONAL CURRENCY DURING THE 1928-1937 PERIOD

YEARS (31 — XII)	AMOUNT (In contos of réis)						
	Treasury Notes	Bank of Brazil Notes	Stabilization Bureau	Discounting Department	Total	Convertible Notes	Inconverti- ble Notes
1928.....	1,952	592	835	—	3,379	835	2,544
1929.....	1,952	592	851	—	3,395	851	2,544
1930.....	(1) 2,543	170	129	—	2,842	129	2,713
1931.....	2,563	170	89	100	2,922	—	2,922
1932.....	2,604	170	64	400	3,238	—	3,238
1933.....	2,978	20	39	—	3,037	—	3,037
1934.....	2,908	20	30	200	3,158	—	3,158
1935.....	2,867	20	25	700	3,612	—	3,612
1936.....	3,470	—	21	560	4,051	—	4,051
1937.....	4,509	—	18	23	4,550	—	4,550

(1) Including 595,000,000\$000 issued by the Bank of Brazil.

(2) Including the following parts of the Conversion Fund Issue: 3,266,000\$000, in 1928; 3,057,000\$000, in 1929; and, finally, 2,950,000\$000, in 1930.

## STOCK EXCHANGE MOVEMENT

## Marketed Public Debt Bonds during the 1929-1937 period

In contos of réis

YEARS	FEDERAL BONDS		STATE BONDS		MUNICIPAL BONDS		TOTAL	
	Value	Indexes	Value	Indexes	Value	Indexes	Value	Indexes
1929.....	197,704	100	33,156	100	28,411	100	259,272	100
1930.....	171,344	86	46,690	140	22,502	79	240,537	92
1931.....	234,627	118	159,450	480	35,986	126	430,064	165
1932.....	194,130	98	172,608	520	32,528	114	399,267	153
1933.....	186,394	94	176,080	531	49,339	173	411,814	158
1934.....	187,230	94	206,567	623	59,296	208	453,093	174
1935.....	216,137	109	201,974	609	36,430	128	454,542	175
1936.....	299,106	151	334,717	1,009	28,430	100	662,253	255
1937.....	305,174	154	283,069	853	39,809	140	628,054	242

## Marketed securities during the 1929-1937 period

In contos of réis

YEARS	FIXED INTEREST SECURITIES						Variable dividend securities		GRAND TOTAL	
	Government		Private		Total					
	Value	Indexes	Value	Indexes	Value	Indexes	Value	Indexes	Value	Indexes
1929.....	259,272	100	10,856	100	270,128	100	103,019	100	373,148	100
1930.....	240,537	92	6,342	58	246,879	91	87,830	85	334,709	89
1931.....	430,064	165	11,639	107	441,703	163	63,710	61	505,413	135
1932.....	399,267	153	13,094	120	412,362	152	50,757	49	463,119	124
1933.....	411,814	158	15,845	145	427,660	158	76,084	73	503,744	134
1934.....	453,093	174	8,246	75	461,339	170	73,618	71	534,957	143
1935.....	454,542	175	10,313	94	464,856	172	68,078	66	532,934	142
1936.....	662,253	255	7,343	67	669,597	247	67,816	65	737,413	197
1937.....	628,054	242	12,109	111	640,163	236	70,009	67	710,172	190



## EXCHANGE

THE need of protecting the value of our currency making it free from unexpected oscillations, which have such a disastrous effect on the rhythm of the export trade, caused the proper authorities to determine to have steps taken to remedy the effects of the exaggerated demand for exchange on our market. By decree N. 97, of December 23, 1937, the control of said market was established (1) under the direction of the Banco do Brasil (Bank of Brazil) which, as an agent of the Government, henceforth operated for account of same.

In taking these steps, the Government did not intend to decree the compulsory sale only of the bills of exchange, but also of the any other transfer of funds to foreign countries. The Banco do Brasil was entrusted with the service of distributing the remittances, said coverage being classified, according to the respective decree of urgency and importance, under the care of the "Fiscalização Bancária" (Banking Control) already annexed to the Bank's "Carteira de Câmbio" (Exchange Office). Said decree also created the 3 % tax on exchange sales in general, afterwards increased to 6 % when the remittances were not for our acquisitions abroad. Aforesaid decree also constituted a fund by the collection of above mentioned taxes and with the profits verified in official operations, to be used as an element of action for the development of the exchange policy.

The measures as prescribed had far-reaching effects on the economic situation of the country, enabling — thanks to the benefits arising out of the new policy — the proper authorities to overcome the crisis which at that time was making things difficult for us. As the President of the Republic recently stressed, in an interview granted to the press, heavy obligations abroad have been punctually met, there occupying an outstanding place among same, the instalments relating to commercial debts and to the purchase of material for National Defence purposes and new machinery and equipment for the Country's industrial service. The Banco do Brasil has fulfilled every obligation of the contracts for the sale of exchange, and regulated the situation of its accounts abroad. Progressively, the funds known as "frozen" in the country were all covered, and credits of these kind are now considered payments in arrears for 30 days.

Such are, in general lines, the consequences of the exchange policy adopted by the Government, based on the most ponderable reasons which attending to the interests of our National economy, also aim at benefiting, in due time, all the countries with which Brazil has financial transactions.

### EXCHANGE RATES

Exchange rates are calculated on the basis of the Rio de Janeiro daily averages of selling rates for sight drafts.

Up to June 1934, the method used for computing and ascertaining daily averages had technical inaccuracies. This being so, the yearly and monthly averages for the 1924/1934 period (except the monthly averages calculated on and after July 1934), must be regarded with a certain reserve, although they

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(1) — Decree-Law N. 1.201, of April 8, 1939, re-established the liberty of action for exchange operations, adopting a new policy for the Brazilian exchange market.

may express accurately enough the general trend of exchange fluctuations during the period in which the different exchange policies had been in force.

The complete and rigorous control of the exchange market was in force from October 1931 to August 1934 (with a slight relaxation from May 1934 to the present time); from September 1934 to January 1935, exchange coverage for imports was changed to 60% at official market rates and 40% at free market rates, the buying monopoly of the "Banco do Brasil" (Bank of Brazil) having been restricted to 155 French gold francs per bag of coffee exported; from February 1935 to December 1937, the official market monopoly was only 35 % of the value of exports, set aside for public purposes (including the service for frozen credit agreements); and, since January 1938, a monopoly of exchange purchases has been in force in favour of the "Banco do Brasil", acting as a representative of the National Treasury.

#### PERCENTAGES OF DEPRECIATION OF THE MILRÉIS INCURRED ON BASIS OF GOLD PARITY DURING THE 1928-1937 PERIOD

Gold parity :— U. S. 11.96 old gold cents per milréis

YEARS	Free market	Official market
1928.....	0.0	—
1929.....	1.3	—
1930.....	9.1	—
1931.....	37.8	47.8
1932.....	—	40.5
1933.....	—	47.1
1934.....	66.5	57.8
1935.....	71.2	57.9
1936.....	71.3	57.3
1937.....	68.9	56.3

#### EXCHANGE RATES ON LONDON, NEW YORK AND PARIS

Average based on daily quotations during the 1928-1937 period

In réis per unit of Foreign currency

YEARS	ON LONDON		ON NEW YORK		ON PARIS	
	Free market	Official market	Free market	Official market	Free market	Official market
1928.....	40,740	—	8,360	—	320	—
1929.....	41,000	—	8,470	—	330	—
1930.....	44,540	—	9,230	—	360	—
1931.....	65,710	58,070	13,660	16,020	530	630
1932.....	—	49,400	—	14,140	—	570
1933.....	—	53,760	—	12,690	—	640
1934.....	74,250	59,690	14,840	11,830	980	770
1935.....	85,090	57,930	17,360	11,790	1,140	760
1936.....	86,020	57,570	17,310	11,620	1,060	700
1937.....	79,430	56,800	16,070	11,370	650	430

## EXCHANGE RATES—FREE MARKET

Averages based on daily quotations during the 1934-1937 period  
In réis per unit of Foreign currency

COUNTRIES	YEARS			
	1934	1935	1936	1937
Argentina.....	3,810	4,570	4,830	4,840
Belgo-Luxemburg Union.....	3,490	3,180	2,930	2,710
Denmark.....	3,340	3,780	3,520	3,610
Italy.....	1,280	1,430	1,311	850
Japan.....	4,500	5,070	5,080	4,690
Netherlands.....	10,080	11,760	11,180	8,980
Portugal.....	680	780	790	730
Sweden.....	3,710	4,260	4,470	4,110
Switzerland.....	4,860	5,640	5,230	3,690
Uruguay.....	6,170	7,010	8,720	9,050
Germany { (Reichsmark).....	5,120	6,790	6,980	6,450
{ (Verrechnungsmark).....	—	5,500	5,370	5,140

## GOLD PURCHASE

IN the plan of economic and financial reconstruction, which is being successfully carried on by the Brazilian government, is included the procedure adopted since December 1933 in relation to the purchase of gold, so that a reserve of this metal may be formed.

The measure has naturally given rise to certain criticisms on the part of some observers who argued that the gold stock accumulated was constituting an inert and inoperative mass. However, the pre-eminent reasons which inspired the wise provision continued to determine the proceeding of the indispensable practice and the volume of purchases is developing with appreciable regularity.

During the latter months of 1933, the purchases were limited to 324 kilos of fine gold in the sterling value of £ 44,371, while in 1934 they totalled 6,683 kilos corresponding to £ 912,731.

The total amount bought during the year of 1935 was 8,162 kilos of fine gold valued at £ 1,114,711. The cost of these purchases was 157,437 contos of réis, the growing ratio of the gold stock having risen to 121 % at the end of 1935, in relation to the previous year. While from 1934 to 1935 the gold bought from the mines passed from 3,358 to 3,591 kilos, which represents an increase of 7 %, the gold purchased from private individuals rose from 3,000 to 4,570 kilos, a 52 % increase being recorded.

In 1936 the total amount of gold purchased ascended to 6,947 kilos, corresponding to £ 948,722. The total cost of this in milréis was 133,928 contos.

From 1935 to 1936 the gold purchased from the mines showed an increase of 334 kilos, *i. e.*, it rose from 3,591 to 3,925 kilos, while that bought from private individuals declined from 4,570 down to 3,022 kilos.

The average annual buying rate remained steady in 1936 (19\$180 per gramme of fine gold, against 19\$270 in 1935) thanks to the exchange stability.

In the course of 1937 the purchases of gold ascended to 6,327 kilos valued at £ 864,119, the average price per gramme being 18\$790.

In December of the same year the State's gold holdings were 28,120 kilos corresponding to £ 3,840,333.



**GOLD PURCHASE FOR THE ACCOUNT OF THE FEDERAL GOVERNMENT  
DURING 1933-1937 PERIOD**

YEARS	TOTAL		FROM THE STATE OF MINAS GERAIS		FROM PRIVATE PARTIES	
	Grammes	Value (contos of réls)	Grammes	Value (contos of réls)	Grammes	Value (contos of réls)
1933.....	324,903	3,912	281,143	3,371	43,760	541
1934.....	6,358,463	92,433	3,358,359	43,929	3,000,104	48,504
1935.....	8,162,336	157,438	3,591,624	68,957	4,570,712	88,481
1936.....	6,947,275	133,928	3,924,712	75,335	3,022,563	58,593
1937.....	6,327,411	112,485	4,425,260	78,701	1,902,151	33,784
TOTALS.....	28,120,388	500,196	15,581,098	270,293	12,539,290	229,903

## BANKING

**W**HILE progress has been made in the Brazilian banking system one cannot say yet that it really copes with our general needs. In a new country in full development of its admirable resources, a great deal should be expected from an ever-increasing expansion of its banking network, of course, with such gradual changes as experience may dictate towards stimulating the various sectors of production.

Hence the creation of a Central Bank, in close relation to the government control, standing out as a convenient measure to ensure the necessary equilibrium in the general credit policy, correcting and neutralizing possible anomalies due to practices adopted by the trade banks.

The utilization of the national capital, whose process of formation has been showing appreciable development ever since the great war, constitutes, in its turn, an eminently relevant task. In Brazil, the most favourable fields are still open to the furtherance of activities by convenient investment of resources in regions that have undergone a rather slow progress on account of the inexistence of an economical system congruent with their natural possibilities.

The initial steps for such a reasonable policy backed by the experience of facts are already being taken, without implying at all an abandonment of the really productive cooperation offered by foreign capital. Suffice it to glance at the fact that of the 35,122,000 contos of réis, which represented in 1937 the assets of the banks operating in Brazil, 27,091,000 contos concerned the national banks.

The "Carteira Agricola", a fund to support farming objectives, recently instituted in the Bank of Brazil, is beginning to be very useful to the national agricultural economy, which for a long time had been in need of such a help. The "Carteira de Redesconto" is the rediscount system also in operation in that bank to control the monetary market. The "Fiscalização Bancaria", acting as the fiscal agent of the Government, controls the general activities of all banking institutions.

According to what the Constitution stipulates, Banks of Deposit may only operate in Brazil if their shareholders are Brazilians. Such banks as were already authorized to operate at the time when the new Magna Charta came into effect, have been given a reasonable period in which to comply with the above provision.



# PRINCIPAL ITEMS OF THE ASSETS AND LIABILITIES OF NATIONAL AND FOREIGN BANKS

ITEMS	VALUE (In 1,000 contos of réls)								
	National Banks			Foreign Banks			Totals		
	1935	1936	1937	1935	1936	1937	1935	1936	1937
Assets .....									
{ Loans and bills discounted.....	6,201	6,303	7,039	1,551	1,415	1,560	7,752	7,718	8,599
{ Cash.....	538	562	820	222	199	244	760	761	1,064
{ Other assets.....	17,091	18,747	19,232	6,378	5,943	6,227	23,469	24,690	25,459
Liabilities ..									
{ Capital.....	877	882	996	149	154	154	1,026	1,036	1,150
{ Sight deposits.....	4,301	4,762	5,582	1,186	1,195	1,323	5,487	5,957	6,905
{ Time deposits.....	1,903	1,931	1,473	376	444	434	2,279	2,375	1,907
{ Other liabilities.....	16,749	18,037	19,040	6,440	5,764	6,120	23,189	23,801	25,160
Percentages { Sight deposits cash.....	12.5	11.8	14.7	18.7	16.7	18.4	13.8	12.8	15.4
{ Total deposits cash.....	8.7	8.4	11.6	14.2	12.1	13.9	9.8	9.1	12.1
{ Loans in relation to total deposits	100.0	94.2	99.8	99.3	86.3	88.8	99.8	92.6	97.6
Total for the assets and liabilities.....	23,830	25,612	27,091	8,151	7,557	8,031	31,981	33,169	35,122

## REGIONAL DISTRIBUTION OF THE PRINCIPAL ACCOUNTS OF NATIONAL AND FOREIGN BANKS

FEDERATED UNITS	MOVEMENT OF THE PRINCIPAL ACCOUNTS (1,000 contos of réls)								
	Loans			Currency in hand			Deposits		
	1935	1936	1937	1935	1936	1937	1935	1936	1937
Territory of Acre.....	0.2	0.2	0.8	0.3	0.8	1.1	1.4	3.1	2.8
Amazonas.....	8.9	15.6	16.5	2.3	3.8	4.6	28.8	30.6	33.1
Pará.....	44.9	47.3	60.1	5.8	5.9	6.5	91.3	96.8	109.7
Maranhão.....	14.6	18.2	16.4	1.9	2.1	3.2	24.3	27.5	31.1
Piauí.....	7.8	8.6	7.8	1.5	1.1	2.4	13.1	15.9	12.1
Ceará.....	50.5	58.9	85.7	10.5	7.9	9.4	68.4	72.5	82.1
Rio Grande do Norte.....	14.0	12.9	19.1	3.4	2.8	3.8	28.4	21.3	19.8
Paraíba.....	31.0	32.8	29.1	4.9	6.3	6.2	33.3	40.3	38.2
Pernambuco.....	296.4	290.5	303.6	38.5	31.7	32.0	272.4	256.1	272.6
Alagoas.....	46.5	46.0	48.9	7.0	5.5	1.6	33.5	32.1	31.9
Sergipe.....	26.3	34.9	36.7	2.7	3.7	2.6	26.4	35.0	33.5
Baía.....	143.0	139.6	159.9	18.5	14.5	16.1	181.3	182.5	228.8
Espírito Santo.....	33.7	38.6	44.6	2.6	4.4	5.8	25.9	35.5	47.9
Rio de Janeiro.....	52.4	84.0	102.9	5.4	10.1	14.4	67.8	109.2	125.6
Federal District.....	3,112.7	2,462.3	2,363.2	286.3	212.0	405.2	2,986.0	3,009.9	2,783.0
São Paulo.....	2,602.9	2,979.1	3,132.6	227.8	273.1	316.1	2,668.9	2,892.8	3,022.1
Paraná.....	88.6	97.6	109.9	11.3	13.0	16.3	84.5	112.1	119.6
Santa Catarina.....	21.9	27.4	41.0	5.9	7.5	12.5	51.8	62.9	92.2
Rio Grande do Sul.....	698.8	786.9	1,188.9	71.8	86.1	103.3	628.5	769.8	990.0
Mato Grosso.....	11.2	17.0	13.5	2.4	3.2	5.5	19.6	26.6	33.0
Goiás.....	2.8	5.6	9.5	1.6	2.1	2.6	5.3	5.1	9.5
Minas Gerais.....	443.6	513.7	808.6	47.3	63.6	92.5	425.6	494.4	693.7
TOTALS.....	7,752.7	7,717.7	8,599.3	759.7	761.2	1,063.7	7,766.5	8,332.0	8,812.3



# *SOCIAL SITUATION*





## URBAN IMPROVEMENTS

IT would be interesting to focus, through elements from statistical surveys, the various aspects of the progress recorded in the urban agglomerations of the country during the last few years.

Among the improvements contained in such statistics, water supply, public lighting and sewerage should be detached as the only services affording sufficiently comprehensive data in available statistical material, and capable of historical comparisons.

In 1,168 Municipalities, out of the 1,304 existing in 1920, there were 785 cities or villages with lighting and 383 without. Of the communities provided with lighting, 422 consumed electricity, 279 kerozene, 52 acetylene and 15 alcohol and 17 used more than one lighting sistem.

In the year above referred to, 317 cities, villages or hamlets were recorded as being provided with water supply. Of these localities 289 were served by the domiciliary water distributing system, and the States then best favoured with this improvement were São Paulo and Minas Gerais, respectively with 104 and 103 urban communities supplied.

As to the sewerage system, the cities benefiting by this service numbered 126 and were located mostly in the States of São Paulo (63), Minas Gerais (33) and Rio de Janeiro (13).

In 1936, of the 1,376 reporting Municipalities out of a total of 1,478 surveyed by the Ministry of Education and Health, 598 were provided with urban water supply system serving 528 cities and 70 villages.

In connection with public lighting, data are not yet available for 94 Municipalities. Of the 1,394 Municipalities included in the statistics, 1,159 were recorded as having public lighting service alone, while those with further domiciliary lighting summed up only 956 communities.

Only in 248 out of 1,376 Municipalities reporting on the section referring to sewerage, there was the said service, while no fewer than 1,331 Brazilian municipalities were lacking the improvement. Among the sewered urban agglomerations 239 had privileges of a town and only 6 were villages.

The conditions of the survey at the time of appraising the data now presented, only 1,379 Municipalities responded the enquiry on urban parks and gardens, 99 being omitted in the compilation. Of the former number 625 had this urban improvement. Among the communities benefiting, 533 were cities and 92 were villages. For a similar number of reporting Municipalities, 625 had

arborization, and these improved areas were distributed into 542 cities and 137 villages.

In 1936, Municipalities numbering 1,378, *i. e.*, 100 less than the total existing in the country, reported on the conditions of their communities in regard to paving. Of such figure, 648 were found with the improvement and 730 without. The improved localities included 517 cities and 131 villages.

In the same year, the existence of 373 public parks was disclosed in 194 out of the 1,376 reporting Municipalities. Of the figure recorded, 350 were Municipal, 15 State and 8 Federal parks.

The foregoing data is not yet definitely completed as previously said and should be taken as a mere indication of the main urban improvements, considered chiefly from the viewpoint of the number of Municipalities reporting the various services under investigation. However inexpressive these figures may be, inasmuch as they compute only partial results, they do not fail to show appreciable indexes of the advancement in most of our urban nuclei.

## FEDERAL PUBLIC HEALTH AND SANITARY SERVICES

ON January 5, 1904, during the Rodrigues Alves Government, by Federal Decree n. 1,151, there were reorganized, by Oswaldo Cruz, the National health services, with the creation of the General Directorate of Public Health, destined to exercise its activities in the capital of Brazil, in the principal sea and river ports and adjacent regions of the country.

On January 3, 1914, the yellow fever scourge having been vanquished, the old Inspectorate of Isolation and Disinfection was transformed into an Inspectorate of Prophylactic Services. In 1919 there was installed the Rural Prophylactic Service, with ample autonomy throughout the country, for the purpose or combating necrosis, malaria, yaws and other endemic diseases which victimized the rural populations of the National territory.

On January 2, 1920, Carlos Chagas, by Decree N. 3,987, created the National Department of Public Health, with a special Corps of Nurses and, in 1927, J. P. Fontenelle organized and directed a decentralized district service, in Inhaúma (Rio), which was the cellula mater of the sanitary régime diffused throughout Brazil.

At the end of 1930 the Ministry of Education and Public Health was created and, on June 21, 1934, Minister Washington Pires, by Decree N. 24,438, organized the general plan of the Public Health, Medical and Social Assistance Services, co-ordinated by the National Directorate of Public Health, Medical and Social Assistance, composed of the Directorate of International Sanitary Defence, Directorate of Sanitary Defence of the Capital of the Republic, Sanitary Services in the States, Maternity and Infancy Protection Services, Assistance to Psychopaths and Mental Prophylactic Services, and Hospital Assistance Services.

Now, after modifications deemed necessary by Minister Gustavo Capanema, pursuant to law N. 378, the National Health Department is directly subordinate to the Minister of Education and Public Health, comprehending



organs for the direction, and organs for the execution, of aforesaid services. The present Director is Dr. João de Barros Barreto, on whose shoulders falls the responsibility of the modern sanitary organization that is an honour to Brazil.

The following are organs of *direction*:—Office of the Director General, with a Secrétariat, Division of Office Routine and Division of Communications; Division of Public Health, in charge of Dr. Ernani Agrícola, entrusted with the organization and direction of anti-malaria, anti-plague, leprosy, and anti-endemic disease services, in the States and Federal District; Division for the supervision of the exercising of Professional work, under the direction of Dr. Roberval Cordeiro de Farias; Division of Hospital Assistance, under the direction of Dr. Samuel Libanio, in charge of all hospital assistance problems throughout the country; Division of Assistance to Psychopaths, under the direction of Dr. Waldomiro Pires, it being the duty of said division to take care of the mentally insane and cure them in mental hospitals; Division of Maternity and Infancy Protection, under the guidance of Dr. Olinto de Oliveira; Federal Health Delegacies, organs intended to act in collaboration with the Federal Government and with those of the States, with seats respectively at Belém (Pará), Fortaleza, Recife (Pernambuco), Salvador (Baía), Belo Horizonte and Porto Alegre, in charge of the following sanitariat doctors: Mario Queiroz, Herbert Antunes, Luis Medeiros, Odorico Antunes, Garcia Rosa, Almir de Castro and Aureliano Brandão; Division of Vital-Statistics, under the guidance of Dr. Eurico Rangel.

Among the organs of *execution*, are to found: A) Public Health Service of the Federal District, in charge of Dr. J. P. Fontenelle, with the following divisions: 1) — Inspectorate of Health Centers, in charge of Dr. Decio Parreiras; 2) — Inspectorate of Special Services, in charge of Dr. Antonio Perryassú; 3) — Inspectorate of Sanitary Engineering, under the direction of Dr. João Pizarro; 4) — Inspectorate of Food Control, under the guidance of Dr. Paula Rodrigues; 5) — Public Health Laboratory, which has as its director, Dr. Fabio Carneiro de Mendonça; 6) — The Paula Candido Maritime Preventive Establishment, under the direction of Dr. Pires Salgado; 7) — Curupaíti Hospital-Colony under the direction of Dr. Theophilo de Almeida; and 8) — the São Sebastião Hospital, in charge of Dr. Synval Lins. B) The Hospital Assistance Service of the Federal District, under the direction of Dr. Francisco Castro Araujo, with the following hospitals: Estacio de Sá, São Francisco de Assis, Pedro II and Cancerology; C) The Service of Assistance to Psychopaths of the Federal District, with the Mental Hospital, Judicial Mental Home, Institute of Neuro-Syphilis, Juliano Moreira Colony and Gustavo Riedel Colony; D) Puericulture Service of the Federal District, in charge of Dr. Martagão Gesteira, with the Arthur Bernardes Hospital. E) Service for the Propaganda of, and Education in, Sanitary Matters, under the guidance of Dr. Abelardo Marinho; F) Port Health Service, under the direction of Dr. Figueiredo Rodrigues, exercising its activities at Manáus, (Pará), São Luis, Fortaleza, Natal, Cabedelo, Recife (Pernambuco), Salvador (Baía), Santos, Paranaguá and Porto Murtinho; G) Frontier Anti-Venereal Service, with dispensaries at Porto Alegre, Santa Maria, Rio Grande, Bagé, Uruguaiana, Sant'Ana do Livramento, Palmar, Jaguarão, Quaraí, D. Pedrito, Itajaí and São Borja; H) Yellow Fever Service, operating in 1,453 localities, in all the States of Brazil, with the exception of São Paulo, where there is a State organization.

The actuation of the National Health Department has been more intensified in the following sectors: anti-leprosy campaign, with the creation of new Establishments for Lepers, and the improvement of those existing in the States of Amazonas, Pará, Piauí, Ceará, Rio Grande do Norte, Paraíba, Pernambuco, Alagoas, Sergipe, Rio de Janeiro, São Paulo, Minas Gerais, Goiaz, Paraná,

Santa Catarina and Federal District; anti-yellow fever service with the aid of the Rockefeller Foundation, comprehending, besides mosquito control, the anti-epidemic services, by making people immune against disease, preparation of vaccines, pathologic anatomy and entomology; anti-tuberculosis campaign, with the construction of, and granting of subsidies to, sanatoria, shelters and preventoria, in Rio de Janeiro, Campos de Jordão, Jurujuba, Teresopolis, Vitoria, Salvador (Baía), Niterói, Porto Alegre, Fortaleza, Belém (Pará) and Belo Horizonte; the organization of twelve modern, fully equipped Health Centers in the capital of the Republic, with directorate, secrétariat, transmissible diseases, syphilis, leprosy, labour hygiene, sanitary police, health certificate, pre-schooling hygiene, consumption dispensaries, and those for the treatment of eye, nose and throat complaints odontalgic, pharmaceutic, laboratory, and smallpox vaccination services; malaria prevention measures in the States of Rio de Janeiro, Ceará, Rio Grande do Norte, and in the Federal District; plague eradication in the North-East of Brazil; repression of the use of torpor producing drugs; formation of technical experts at special courses in the U. S. A.; and the care of the feeble-minded persons at Mental Homes.

*By Decio Parreiras, M. D.*

## HOSPITAL ASSISTANCE

THE services of curative medical assistance in Brazil owe to private enterprise their principal accomplishments worthy of reference. The Government has always stimulated these activities by means of financial help and special favours granted in order to permit the best results.

Among the private hospital organizations of wider scope in the charitable field, the "Santa Casa da Misericórdia do Rio de Janeiro" is prominent. The foundation of this institution by the Sisterhood of Mercy dates back to the latter part of the XVI century and today its large and completely remodelled general hospital, still with the same classic architecture, ranks with the best in the world in medical efficiency. Besides many other hospitals founded from religious or humanitarian motives, oficial and semi-official general hospitals, maternity homes, convalescent homes, sanatoria, mental and special public hospitals for incurables have also been instituted in Brazil. At present, numerous modernly built private health establishments furnished with the newest scientific equipment are also to be found in Rio de Janeiro and throughout the rest of the country.

Public health authorities have assumed many governmental functions in activities relating to hospitals and treatment, centering their efforts chiefly around the institution of sound programs of a nation-wide medical assistance. The trend of the Federal services, however, is mostly toward cooperation with the States, Municipalities and private organizations in the establishment, maintenance and extension of a combined action for promotion of health, the prevention of sickness, and the saving of life.

In the realm of official hospitals and sanatorium facilities, legislation has not always been framed under a uniform criterium involving the responsibility of the Public Power. Provisions have either placed the burden predominantly



upon the Federal Government or have, of necessity, charged the States or the Municipalities with a large share of the scheme for supplying medical care and treatment.

The federal hospital services depended upon the National Public Health Department, which managed and controlled the various public centers of hospitalization in general for indigent patients. In 1926, the utilization of a special fund, instituted by a budgetary law to maintain such assistance, was entrusted to an administrative council, and, on the creation of the Ministry of Education and Public Health, in 1930, the entire hospital system together with all the other divisions of the Health Department came under the charge of the new Ministry.

The problem of hospital facilities both in private and public properly equipped establishments of various types is well under control also in the States of the Federation. And the total number of such institutions is progressively increasing, as will be seen by the following data: 1908 — 296; 1915 — 583; 1930 — 915; 1933 — 1,100; 1934 — 1,109; 1935 — 1,258; 1936 — 1,284; 1937 — 1,337.

#### MEDICAL AND HEALTH ASSISTANCE IN 1935

FEDERATED UNITS	ESTABLISHMENTS					Persons granted first aid during the course of the year	
	Federal	State	Municipal	Private	Total	In-patients	Out-patients
Territory of Acre.....	—	5	—	7	12	757	10,787
Amazonas.....	2	6	—	8	16	7,059	23,843
Pará.....	3	44	1	10	58	20,859	172,100
Maranhão.....	1	9	—	3	13	3,069	23,265
Piauí.....	1	10	—	4	15	2,273	47,273
Ceará.....	4	9	—	9	22	16,891	76,891
Rio Grande do Norte.....	1	8	—	3	12	2,772	28,244
Paraíba.....	1	14	1	5	21	6,491	76,512
Pernambuco.....	1	25	3	20	49	32,460	120,365
Alagoas.....	1	4	—	8	13	4,576	24,742
Sergipe.....	1	3	—	12	16	2,779	8,727
Baía.....	3	14	4	28	49	13,983	258,370
Espírito Santo.....	1	16	—	5	22	5,073	25,828
Rio de Janeiro.....	9	14	8	34	65	15,986	108,305
Federal District.....	53	—	9	68	130	84,956	1,354,592
São Paulo.....	12	62	6	199	279	155,141	911,641
Paraná.....	8	7	—	16	31	15,313	23,953
Santa Catarina.....	2	—	3	25	30	14,318	9,002
Rio Grande do Sul.....	25	7	6	70	108	73,153	113,389
Mato Grosso.....	9	—	—	5	14	5,041	8,482
Goiás.....	1	1	—	4	6	941	12,823
Minas Gerais.....	10	52	—	119	181	57,985	319,238
<b>BRAZIL.....</b>	<b>149</b>	<b>310</b>	<b>41</b>	<b>662</b>	<b>1,162</b>	<b>541,876</b>	<b>3,758,372</b>

**PUBLIC DISBURSEMENTS FOR MEDICAL AND HEALTH SERVICES  
DURING 1935**

FEDERATED UNITS	EXPENDITURE (IN MILREIS)			
	Federal	State	Municipal	Total
Territory of Acre.....	249,487	—	28,269	277,756
Amazonas.....	188,168	1,206,241	243,224	1,637,633
Pará.....	209,822	3,741,552	894,029	4,845,403
Maranhão.....	88,891	1,231,716	61,367	1,381,974
Piauí.....	47,178	373,013	177,879	597,870
Ceará.....	214,735	1,660,365	127,679	2,002,779
Rio Grande do Norte.....	44,395	1,562,382	161,198	1,767,975
Paraíba.....	33,342	1,265,290	194,787	1,493,419
Pernambuco.....	233,529	6,635,855	258,694	7,128,078
Alagoas.....	72,268	1,115,800	17,618	1,205,686
Sergipe.....	53,736	444,979	34,078	532,793
Baía.....	233,845	3,469,293	616,359	4,319,497
Espírito Santo.....	59,888	1,644,962	136,927	1,841,777
Rio de Janeiro.....	735,327	2,135,923	1,925,599	4,796,849
Federal District.....	86,849,195	—	18,305,200	105,154,395
São Paulo.....	683,896	34,687,274	3,666,672	39,037,842
Paraná.....	144,803	1,359,160	163,063	1,667,026
Santa Catarina.....	411,439	803,752	140,193	1,355,384
Rio Grande do Sul.....	486,336	4,804,277	2,253,710	7,544,323
Mato Grosso.....	69,721	261,636	27,098	358,455
Goiás.....	1,870	90,554	22,005	114,429
Minas Gerais.....	642,350	9,063,417	930,528	10,636,295
Not stated.....	19,169,271	—	—	19,169,271
<b>BRAZIL.....</b>	<b>110,923,492</b>	<b>77,557,441</b>	<b>30,385,976</b>	<b>218,866,909</b>

## PUBLIC HEALTH CAMPAIGNS

THE outlook of public health activities in Brazil is encouraging. The comprehensive scheme of measures worked through the Health Department in recent years has considerably widened the scope of preventive medicine in the country. The Health Department divisions in Rio de Janeiro and their regional extensions have maintained the closest and most helpful cooperation with the regular State and Municipal health organizations. New and adequate working plans designed for the various health agencies have been completed and are being operated for protective inoculations, periodic health examinations, prevention and correction of physical and emotional defects, drug habit-forming prevention, nutrition, accident prevention, public health education, and social hygiene.

The general tendency is primarily to improve the quality and quantity of health work in every sector of this sphere. Public health nursing service has expanded and the people are hearing more than formerly of essential features of prevention of disease and treatment. Special investigations were made on certain endemic diseases and on sanitation, water supply and sewage disposal,

and various regions of the country have been selected for intensive activities towards the improvement of the areas where unfavourable conditions prevailed.

A nation-wide campaign against the country's major problem — tuberculosis — was started and all centers and dispensaries fighting against this disease have heartily engaged in the work. A tuberculosis course was provided to train executive and technical specialists according to the probable needs of personnel in this field, and, among other outstanding measures promptly introduced in hospitalization, therapy, etc., the use of B. C. G. vaccination began to be largely intensified. This service showed 6,745 immunizations performed in 1935, 9,121 in 1936 and 10,744 in 1937, the total summing up 50,473 immunizations since 1927 when B. C. G. was started in Brazil.

A great deal is being accomplished in the field of leprosy by the inclusion of adequate segregation, treatment and protection facilities for those afflicted with this disease. Malaria, plague and yellow fever continue to be controlled by the competent branches of the Federal and State health systems so as to be no longer menaces to the people. The anti-mosquito work in 1937 was being carried on 1,213 localities and 29,585,261 houses and 148,267,139 water containers were inspected during the year, while, on the other hand, 38,387 persons were immunized against yellow fever.

Through appropriations specially granted by the Federal Government, maternal and child health services have been greatly intensified both in Rio and in the States. The fight against infant mortality is being strongly carried on under the supervision of the specific Federal organ of execution, at present intensively cooperating with about 61 % of Municipalities and 471 voluntary institutions in the country. Steps were taken for child health conferences and other adequate propaganda with a view to educating the public opinion concerning the objectives of these official campaigns in which the keynote is the control of the environment of maternity and childhood. Another goal envisaged in this branch of work is the raising in the whole country of the cooperative parental responsibility for the welfare of children, whom the Brazilian Constitution declares also object of special care and guarantee on the part of the State, which will take all measures to assure them physical and moral conditions of healthy life and the harmonious development of their faculties.

## ASYLUMS AND REFUGES

**I**NSTITUTIONAL care in the field of social work has attained a new form of expression through the cooperative efforts of the public health services and voluntary organizations disseminated all over the country.

The number and variety of such activities under governmental auspices have also increased in the direction of the ideals to meet the community needs. In fact, besides the achievements of the public health and child welfare agencies, there are in this respect particular problems effectively met by certain social institutions and inter-related with the health activities in both the medical and non-medical branches.

In a coordinating movement, social workers and public health authorities have been concentrating their efforts to organize constructive schemes of an



ever-increasing efficiency towards the general social work policy and the improvement of methods and standards in the establishments caring for the aged and incurable, as well as for dependent, neglected and handicapped children.

Accordingly, the new Constitution declares that the moral, intellectual or physical abandonment of childhood and youth indicates a grave fault on the part of those who are responsible for their safeguard and education, and imposes on the State the burden of providing the necessary comfort and care of their physical and moral preservation. Indigent parents have the right to invoke the aid and protection of the State for the maintenance of their offspring.

Many secular organizations for the relief of the infirm and the poor, founding asylums, benevolent and orphan homes, refuges for destitute women and girls and for the aged and other institutions providing shelter and maintenance for the afflicted and the needy have their roots in the deeds of mercy of the Roman Catholic church. Since the early days of the colony the religious orders occupy, indeed, a conspicuous position in the promotion and upkeep of such welfare activities.

Establishments erected, supported and administered by private institutions or voluntary boards, among which those conducted by religious bodies, amount to a considerable number and are in all larger centers of population. In most instances such establishments are assisted in their work either by federal, state or municipal subsidies or simultaneously by two or three of these agencies.

Notwithstanding the significant contributions of private philanthropic enterprise providing accomodation on a benevolent or charitable basis, the government still faces larger and larger financial responsibilities arising from developments and extensions or innovations incidental to new programs carried on a considerable scale in the field of public social work.

The National Council of Social Service, created in the Ministry of Education and Health, cooperates effectively with all the public, semi-public and voluntary agencies concerned with related problems of social welfare. As an advisory organization the council investigates every aspect of social work and gives expert advice on all matters concerning the institutional care. Its influence over the various services depending on the government for financial aid and for inspection of routines is great and is exercised chiefly in the interests of a more equitable provision of subsidies and better coordination of the work.

According to comprehensive tables compiled for the period 1932-1934, the total number of the various institutions classified under the heading "Asylums and Refuges" was: 1932 — 378, 1933 — 379, 1934 — 518, The totals for 1934 were distributed as follows: Private institutions 438 (254 subsidized, 184 non-subsidized), state 41 (4 subsidized, 37 non-subsidized), municipal 25 (3 subsidized, 22 non-subsidized). According to the objectives of these institutions, the following classification and figures were recorded: care of the childhood and youth 236 establishments, care of the needy 191, care of the mentally deficient and psychopathic 35, care of lepers 29, social regeneration 10, contemplative life 6, care of the blind 4, care of destitute girls 4, care of the deaf and dumb 2, care of the war disabled 1. The total number of inmates at 31st December 1934 was 40,668 (21,871 female, 18,797 males) in 380 reporting institutions.



## LABOUR LEGISLATION AND SOCIAL INSURANCE

IN no other sector of Brazilian life have there been such profound and significant achievements, in the last eight years, as in the field of social policy. Peaceful vindications have been liberally accorded by a continuous improvement of the social laws, based upon the equilibrium and discipline of labour activities in Brazil. The new policy has also been relevant in its aims to make closer and closer the relations between the various classes and the Public Power, through a constructive system of mutual cooperation.

The creation of the Ministry of Labour, in 1930, that is, immediately after the political change the Nation went through in that year, has been a decisive factor in implanting new practices for the control of the workers' problems under principles embodied in legislative measures for labour reconstruction, which form one of the most prudent, fair and advanced social legislations in all the world.

It was incumbent upon this Ministry to promote the organization of trade-unions throughout the country, and there was also maintained in the Ministry a specialized technical organ, the National Department of Labour, with the following structure: 1) an Inspectorate to superintend the carrying out of the labour laws and regulations, 2) a Court to deal with labour cases, 3) a Service of Professional Identification for records and for issuing identification cards; 4) an Actuarial Division, a technical body devoted exclusively to questions affecting the provident system and social insurance.

The States have their regional Inspectorates, as organs representing the Ministry, while the National Labour Council is the technical and advisory central organization, operating in the Capital of the Republic, mainly devoted to the study and judgment of cases connected with social insurance. The Council is composed of 18 members: 4 representatives of the employers, 4 of the employees, 4 of the Ministry, and 6 technicians.

In summarizing the magnificent strides taken by Brazilian legislation in labour matters, suffice it to state that since October 1930 to July 1938 no fewer than 190 decrees were issued with the object of ameliorating social conditions and ensuring proper assistance to the working classes. Enactments have rationally regulated women's labour in industrial and commercial concerns, prohibiting their night work between the hours of 10 p. m. and 5 a. m., establishing the principle of equal remuneration irrespective of sex for every kind of work of equal value, ensuring the pregnant mother a period of rest without loss of salary, fostering the institution of creches and providing other measures for protection of female labour.

Rules were laid down for ensuring hygienic environment to youngsters engaged in industrial work. Collective labour agreements have been instituted, together with professional identification, which guarantees the worker, *inter alia*, the right to make his claims. Annual vacation with pay was provided for all employees whether in commercial, banking, industrial establishments or in private institutions of assistance, by means of a practicable legislation. Regulations enacted have ensured definite working hours and other favourable labour conditions for employees in houses of amusement; in pawn shops; in overland transports; banks and banking houses; barber shops; pharmacies; bakeries; warehouses of the shipping companies and allied establishments in the Federal

District; cold storage plants, cable, telegraph and radio services and hotels, boarding houses and akin establishments. The professions of engineer, architect, land surveyer, agronomist, auctionier and chemist have been made subject to regulations. The merchant shipping has been nacionalized and crews organized to the same end. Workers' dwellings have been erected in special residential sections called "Vilas Operarias" and a system of advance and other facilities for the rent or purchase of homes was provided. Cooperative stores have been fostered and the food problem of labourers has also received proper attention.

In spite of the fact that the Regional Inspectorates were operating in order to avoid any misunderstanding between employers and empyees, it did not take long until a need was felt for courts designed to settle collective and individual disputes. Thence the institution of joint conciliation committees, boards of conciliation and judgment and divisions of maritime work.

Brazilian labour legislation ensures to all workers, irrespective of nationality, perfect equality of conditions and of rights. However, it guarantees the necessary preference for natural born and naturalized Brazilians in the professional activities in both the country and the cities, under the so-called "law of two thirds". The professional or trade association is free. However, only a syndicate legally recognized by the State, has the right to be the legal representative of those who participate in the group of production for which it was consituted, as well as to defend their rights before the State and the other professional organizations, to enter into collective labour agreements, binding on all their members, to levy contributions and to exercise towards them the function delegated by the public authority.

The Constitution of November 10th 1937 empowered the Executive to issue decree-laws. From that date on, until July 1938, 26 governmental Acts were added in order to reinforce and best conform the labour legislation to the needs of the Nation. The "Instituto de Previdência e Assistencia aos Servidores do Estado" was created as the organ with statutory recognition and powers to handle all the matters affecting the contributory pensions and assistance to public servants. A covenant was signed in Geneve relating to the employment of women in underground work of any mine whatsoever. The protection granted to industrial workers has been likewise extended to employees in sugar, alcohol and aguardente refineries. A labour judicial procedure was created in the Constitutional text, to be later regulated by law, in order to avoid disputes arising between employers and employees, under the social legislation. The project of law referring to such procedure, elaborated by a Committee of technicians and jurists, and now pending a Government resolution, started from the following general principle:— The Labour Justice is special and of economic nature. It aims at social peace. It is within its province to take cognizance of all questions arising from labour agreements, such as wages, healthy or unhealthy conditions of work, periods of rest, statutory leave (as in the case of pregnancy), compulsory re-engagement, strike and lock-out (which, according to the terms of the Brazilian Constitution now in force, "are declared anti-social instruments, detrimental to labour and to capital and inconsistent with the superior interests of national production), unjust dismissal, etc. (1) A minimum wage was prescribed, which, according to a legal definition, is a rate of remuneration capable of satisfying, in certain regions of the country and at a certain time, the normal necessities of food, lodging, clothing, hygiene and transport.

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(1) — On May 1, 1939, there was signed a decree creating the Justice of Labour and regulating its organization.



Once the enquiry on the matter is finished the basic wage-rate will be fixed for the various regions according to the mode of living peculiar to each of them and in the light of the economical indexes secured. Such a measure will proportionate real benefits to the Brazilian workers, raising their material and moral standard of living within a moderate and equitable criterium.

With regard particularly to the provident system as a form for social preservation, no less prominent have been the initiatives and undertakings developed in Brazil. The social insurances were met with by an extensive utilization of them on the part of various organizations providing superannuation and pensions, such as "Institutos" and "Caixas de Aposentadorias e Pensões". Over one hundred "Institutos", and even more "Caixas", are now operating in the country.

The capitalizing movement that such institutions represent attains considerable amounts which demand prompt utilization of the funds. The large building inaugurated in November 1938 and where the Ministry of Labour has its seat in the capital of the Republic, occupying an area of 3,933 square meters, was erected partly upon a loan made with the "Instituto de Aposentadorias, e Pensões dos Comercíarios", the organization that deals with the social insurance, superannuation and pensions for the commercial employees.

The "Institutos" are different from the "Caixas" not only in their constitution and methods of management but also in respect to both the number of members and the extent of territory covered. The "Caixas" consist of employees in each of the public services concerns or by more than one of such concerns, in virtue of amalgamation or incorporation recommended by the National Labour Council, while the "Institutos" in turn consist of classes having sometimes and inter-professional character.

The management of the "Caixas" is exercised through Boards composed of an equal number of representatives, chosen both from among employees and from the concerns, and is presided over by a member thereto elected by them. The "Institutos", however, are administered by a president (specially appointed by the President of the Republic), who is assisted by an administrative or fiscal council composed of elected representatives of both the members and the employers.

The "Institutos" exercise their jurisdiction over the whole territory, while the "Caixas" have it limited to the circumscription of the public services concerns wherewith they are connected. The difference thus between the number of members of both the ones and the others is very large, as much so as are the areas comprised within their scope of activity.

The total receipts in milréis of these institutions in 1937 was 359,445:403\$, and the amount expended during the year was 124,184:539\$700, thus leaving a balance of 235,260:863\$300. The total assets were represented in 1937 by the amount of 940,396:830\$500 which includes: Public debt securities and stock 444,261:918\$400; immovable properties for seats of these institutions 10,348:283\$800; "Carteiras prediais" (funds for building and construction purposes) 16,631:759\$900; "Carteiras de empréstimos" (loans or advances on pay rolls security) 67,791:766\$900; cash on hand and in banks 132,295:858\$900. Benefits granted during the year amounted to: Super-annuation 56,762:990\$900; pensions 20,237:936\$160; hospitalization and medical assistance 14,313:948\$700.

The revenue as estimated for 1938 will be 452,295:733\$300 and the expenditure 166,604:012\$800, thus leaving a probable balance of about 300,000 contos.

The assets for 1938 are not yet definitely computed, but will certainly go beyond a million contos of reis. In 1939 they will attain probably one and half

million contos, because the total receipts being valued at 618,178:927\$900 and expenditures at 209,705:770\$200, the probable balance will be 408,473:152\$200.

Estimates of the expenditure on benefits for the year 1939 are foreseen as follows: ordinary superannuations, 43,587:186\$400; superannuations due to disablement 40,173:481\$800; pensions 33,018:809\$000; hospital and medical services 29,399:475\$900.

A National Council of Social Service was instituted in the Ministry of Education and Health and is invested in the function of studying every feature of the social problem in Brazil, having further the attribute of an advisory organ to the Public Powers and to the private services for benefit of the community, in what concerns the subject of social prevention and care. It is also, *inter alia*, a duty of the Council to elaborate the social service organizing plan to be carried on throughout the country, which shall embrace the administrative organs and the assistance activities designed to protect the citizen and his family, whenever he comes to a state of deficiency or suffering due to extreme poverty or consequent to any other form of social maladjustment.

The Constitution of November 10th gave a corporative structure to the national organization, determining deep modifications in the Brazilian labour law. Thus, the unionized system will have to go through some transformations in the routine followed until now, and to adapt itself to the corporative trends of the future organization of labour in Brazil. With such changes, however, the social legislation of labour will gain more and more in consistency and stability by the equipoise between the capital and the labour, by the cooperation of the working classes with the State, and the harmony of the productive forces, all within a relevant programme of social justice and human solidarity.

## ANTI-DROUGHT WORKS

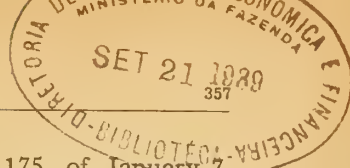
**M**OST of the North Eastern Region of Brazil is subject to periodical droughts which, paralyzing its agricultural and cattle breeding production, reflect in a disastrous manner on local economic and social affairs.

Less to the absolute lack of rains, than to their irregular distribution, both in time and space, allied to the geological conditions of the soil and to the almost complete lack of vegetation — contingent to the floods — are due the prejudicial effects of the capricious climatic manifestations of the North-East.

To correct said effects by means of works for the accumulation and regularization of the torrential régime of the water-ways, utilizing the accumulated water for farming purposes by means of irrigation, create a system of communications that permits the circulation of the natural wealth, stimulate farming and pastoral production by means of co-operation with the farmers, cattle breeders and other interested parties, — such are the capital points of the programme that the Federal Inspectorate of Anti-Drought Works is realizing in the North-East of Brazil, for the purpose of stabilizing and improving the condition of the economic and social affairs of the region.

Prolonged meteorological observations indicated, as the zone suffering most from the inclemencies of the phenomenon, the region comprehended between parallels 3° and 13° latitude South and meridians 35° and 44° W. G.





Aiming at putting an end to dispersive works, law N. 175, of January 7, 1936, marked out, in accordance with said observations, an area of approximately 670,000 Km.<sup>2</sup>, where the Inspectorate applies the financial resources intended for the execution of its programme. Said area covers eight North-Eastern States from Piauí to Baía.

Besides aforesaid delimitation, it was absolutely necessary to reform the plans of action followed from 1909 — the year in which the Inspectorate was created — to 1930, and which were reflexes of the irregular distribution of budget appropriations

The reform of the Regulations of the Inspectorate, approved by decree N. 19,726. of February 20, 1931, and above mentioned Law N. 175, fixed along general lines the plan of the whole work to be done and this is a great step forward in the systematization and efficiency of the undertaking. In said plan there are foreseen works whose construction will remain in direct charge of the Union, and others, which will be executed by means of co-operation between the Union and the interested parties, whether same be States, Municipalities or just private parties.

For the last named works, which have consisted of dams and wells, the Union helps the States and Municipalities with 50 % of the estimated cost of the works, granting 70 % of said cost to private individuals or associates. The studies and projects of aforesaid works are drawn up by the Inspectorate.

The important works, under the direct charge of the Union, have, in synthesis, consisted of the following:

a) — of the principal dams, irrigation and regularization systems necessary for the proper agricultural utilization of the cultivable land in the basins mentioned below, and which thus became integral parts of the five general systems of works:

- I — The Jaguaribe System, in the State of Ceará;
- II — The Acaraú System, in the State of Ceará;
- III — The Alto Piranhas System, in the State of Paraíba;
- IV — The Baixo Piranhas or Assú System, in the State of Rio Grande do Norte.
- V — The Apodi System, in the State of Rio Grande do Norte.

b) — of dam construction work of recognized public utility, on land suitable for irrigation and farming, not included in the general systems indicated above;

c) — of a highway system connecting the up-country part of the dry zone with the principal ports on the coast, the whole system being conveniently inter-connected from end to end, giving access to the principal works of the programme; •

- d) — of wells all along the highways;
- e) — of agronomical services in the irrigation basins;
- f) — of pisciculture in the dams;
- g) — of the utilization of the São Francisco River.

Since 1931 above mentioned services have been greatly increased. Among the good results of the 1931-1937 period of activities, we may cite the following: 28 public dams, with a capacity of 1,250,000,000 m.<sup>3</sup>; 88 dams constructed by co-operation, with a capacity of 106,700,000 m.<sup>3</sup>; irrigation canal systems covering a total area of 5,000 hectares; 3,700 kilometers of highways; 2,886 ordinary works of art; 776 special works of art, in reinforced concrete, to a total extent of 6,958 meters; 593 wells, the shafts sunk reaching a total of 27,300 meters, producing altogether 1,650,000 liters per hour; 12 experimental farming

and cattle breeding stations, in the irrigation basins; distribution of 84,000 models of different species of fish and studies of various categories.

With the improvement of the economic condition of the region, thanks to the works executed, amplifications of the organized plans are appearing. This appearance of new needs, constitutes an evident proof of the progress of said region, otherwise we would have first stagnation, then decadence.

The plan of anti-drought works is thus developing in accordance with the new demands of the surroundings caused by the uplifting of the standard of living in consequence of aforesaid works.

There has now been drawn up a plan of works for a period of ten years (1939-1948) estimated to cost about 1,754 thousand contos of réis, comprehending in its general lines:

- a) — conclusion of the dam construction and irrigation works now under way;
- b) — new dam construction and irrigation works;
- c) — amplification of the present road building plan from 6,000 to 10,000 kilometers;
- d) — utilization of the stretch of the São Francisco River between Traipú and Barra do Rio Grande, for irrigation, power and navigation purposes;
- e) — intensification of co-operation works;
- f) — continuation of the agricultural, piscicultural and other permanent services.

#### PUBLIC DAMS BUILT IN THE NORTH-EAST REGION OF BRAZIL DURING THE 1906-1937 PERIOD

YEAR OF COMPLETION	Quantity	Capacity (m3)	YEAR OF COMPLETION	Quantity	Capacity (m3)
1906.....	1	125,694,000	1922.....	5	5,427,000
1907.....	1	40,000,000	1923.....	8	34,893,000
1910.....	3	21,672,000	1924.....	2	40,100,000
1911.....	1	313,000	1926.....	1	7,618,000
1912.....	4	609,000	1927.....	2	8,573,000
1913.....	4	12,339,000	1928.....	4	76,041,000
1914.....	5	10,321,000	1929.....	1	29,753,000
1915.....	3	21,710,000	1932.....	5	78,342,000
1916.....	13	13,417,000	1933.....	10	105,312,000
1917.....	9	17,771,000	1934.....	4	178,685,000
1918.....	3	77,030,000	1935.....	1	322,200,000
1919.....	5	58,372,000	1936.....	7	546,850,000
1920.....	8	8,029,000	1937.....	1	17,600,000
1921.....	8	10,980,000	TOTALS.....	119	1,869,651,000

#### DAMS BUILT BY CO-OPERATION IN THE NORTH-EAST REGION OF BRAZIL DURING THE 1912-1937 PERIOD

YEAR OF COMPLETION	Quantity	Capacity (m3)	YEAR OF COMPLETION	Quantity	Capacity (m3)
1912.....	2	430,700	1926.....	2	3,270,000
1913.....	2	90,800	1928.....	2	2,158,400
1914.....	4	1,482,800	1929.....	1	7,003,100
1915.....	2	918,000	1930.....	1	3,344,300
1916.....	5	1,780,700	1931.....	7	5,267,900
1917.....	3	2,504,000	1932.....	5	8,841,700
1918.....	1	75,400	1933.....	17	18,194,000
1919.....	5	1,516,000	1934.....	18	27,127,400
1920.....	2	673,000	1935.....	7	15,330,600
1922.....	2	4,107,600	1936.....	25	73,813,900
1923.....	1	308,000	1937.....	8	17,386,300
1924.....	1	630,000	TOTALS.....	123	196,254,600

# *CULTURAL SITUATION*





## EDUCATION AND CULTURE

IT is the sole jurisdiction of the Union, pursuant to provision contained in the Constitution of November 10, 1937, now in force, to determine the bases and fix the scope of national education, organizing the programs which should be followed for the physical, intellectual and moral formation of childhood and youth. The Union shall have also sole jurisdiction to legislate on the national education, its methods, standards and control. Art, science and their teachings are, under the terms of aforementioned statute, open to the initiative of the individual or to that of associations, both public and private. It is the duty of the State to contribute, both directly and indirectly, toward their stimulation and development, assisting or founding artistic, scientific and educational institutions. Under the same Constitution, to the childhood and youth who lack the necessary resources to obtain an education in private institutions, it is the duty of the Nation, the States and the Municipalities, to assure them, by founding public educational institutions of all grades, the possibility of receiving instruction adequate to their abilities, aptitudes and vocational tendencies. Pre-vocational and professional education designed for the less favoured classes is, as expressed in that fundamental law, the first duty of the State. It should carry out this duty by founding institutions of professional instruction and subsidizing those established on the initiative of States, Municipalities and individuals or private professional associations.

Primary education is compulsory and free. Physical education, civic teaching and manual training are compulsory in all primary, normal and secondary schools; no school of any of these grades will either be approved or recognized unless complying with this precept. Religious instruction can be included in the curriculum of primary, normal and secondary schools. However it must not be made an obligatory subject for teachers or professors, nor attendance be made compulsory for the pupils.

The Constitution considers it the first duty and the natural right of parents to provide for the complete education of their offspring. "The State will not hold itself aloof to this duty, but will collaborate, either in a principal or secondary manner, in order to facilitate the execution or to meet the deficiencies and omissions of private education".

The historical, artistic and natural monuments, as well as the landscapes or the points particularly gifted by nature, enjoy the protection and special care of the Nation, of the States and of the Municipalities. Offenses committed against these, will be considered equivalent to offenses committed against national property.

Public instruction throughout the country is provided in establishments supported and maintained by the Federal Government, by the State Governments and by the Municipalities, but here highly significant is the contribution of private enterprise towards educational activities. The higher, secondary, commercial and agricultural courses are all governed by federal legislation fixing the standards whereunder courses must be carried out in order that diplomas or certificates issued may officially be recognized by the Union. In addition to the supervision of these courses, the Federal Government also provides directly the higher, secondary, supplementary primary and corrective and the professional instruction as well. These are ministered through establishments which, with but few exceptions (those designed for agronomics, military high and higher grades, and corrective teaching for delinquents and abnormal, subordinate respectively to the Ministries of Agriculture, Navy, War and Justice), depend on the Ministry of Education and Health. The action of this Secretariat of State is developed through the administrative, cooperative and executive organs prescribed by Law N. 378 of January 13, 1937, viz: The National Department of Education, comprising Divisions of Primary, Industrial, Commercial, Home Economics, Secondary and Higher teaching and of Extra-school and Physical Education; National Council of Education; and the properly speaking educational services, represented by the University of Brazil, by various distinct institutes of higher education, the Pedro II College (secondary school), 20 industrial lyceums, the Benjamim Constant Institute for the blind, and National Institute for the deaf and dumb. Various other organizations which constitute also agencies for guidance, protection or operation of educational activities complete the structure of the Ministry, among these being prominent the National Institute of Pedagogical Studies, the National Institute of Educational Cinema, the Oswaldo Cruz Institute, the National Museum, the National Observatory, the National Library, Ruy Barbosa's House, Historical and Artistic Patrimony Service, the National Historical Museum, the National Fine Arts Museum, and the Radio Education Service. Several committees and special councils, such as the National Theatre Committee, Committee on Didactic Books, Committee on Children's Literature, University of Brazil Planning Committee, the National Council of Social Service all cooperate in the study of the most important cultural problems within the scope of the Ministry.

The statute of the Brazilian universities was promulgated in April 1931, the same date of the decree that reorganized the University of Rio de Janeiro. The latter then embodied the Faculties of Law and Medicine, the Engineering School, the School of Mines, the Faculty of Odontology the National School of Fine Arts and the National Institute of Music. The aforementioned decree has provided for the further incorporation of other schools and faculties, including that of Education, Science and Letters and that of Political and Economical Sciences, to be established latter.

Law N. 452 of July 5, 1937, organized the University of Brazil which superseded the old University of Rio de Janeiro. The new organization will be formed not only by incorporating the 15 national faculties or schools comprising pre-existent institutes and others to be created as well, but also the University College, for complementary teaching, and the Nursing School, besides 16 scientific institutes which are included in the system for purposes of cooperation. The same Law set up the University Planning Committee and promoted the means for the future construction of the University City, fixing likewise the appropriations to cover the carrying out of such enterprise.

The structure outlined by Law N. 452 will include the following institutions: National Faculty of Philosophy, Sciences and Letters; National Faculty



of Education; National School of Engineering; National School of Mines and Metallurgy; National School of Chemistry; National Faculty of Medicine; National Faculty of Dentistry; National Faculty of Pharmacy; National Faculty of Law; National Faculty of Politics and Economics; National School of Agronomy; National School of Veterinary Medicine; National School of Architecture; National School of Fine Arts; National School of Music.

At present only 8 of these institutions of learning are really being operated within the University. Such are the schools and faculties of the former organization plus the National School of Chemistry.

The Federal Government is, however, taking due steps with the end in view of organizing the faculties and schools dealt with in Law N. 452. In this connection, several establishments that were maintained by the University of the Federal District, such as, for instance, the Faculty of Philosophy, Science and Letters and that of Politics and Economics, are to be transferred to the University of Brazil, in compliance with a Decree-law of 1938 that suppressed the Municipal institution.

The Hospital of Clinics designed for medical training, will form an integral part of the University of Brazil, while the professional schools of ordinary teaching, which become strictly necessary as auxiliary elements of the higher education given at the University, shall be contemplated as complementary agencies of the institution.

The enrollment in the courses of the University of Brazil shall always be limited in accordance with the teaching capacity of the incorporated educational institutions, the selection of students being made by a procedure fit for determining their aptitude and preparation. Admission to the University will be made accessible to students from every region of the country. To needy students who have commenced their studies since the first series of the courses, the University will award a scholarship valued at 300\$000 cash a month and exemption from all tuition fees and other dues. These scholarships will number twenty each year and the choice for their allotment must fall on healthy students with a record of irreproachable conduct and still the following requisites rigorously determined by a competitive examination carried out in conformity with the regulations: high intellectual capacity and thorough secondary preparation. The University of Brazil may grant financial aid for excursions, within the appropriations available, and may also, on the recommendation of the University Council, send abroad annually one or more of its students of exceptional intellectual merit to pursue studies on special problems contained in teaching programs.

Besides the University of Brazil, there are also other institutions of the same kind in the States of Minas Gerais, São Paulo and Rio Grande do Sul.

Independent and voluntary establishments provide also higher education. Secondary courses are extensively taught in public and private gymnasia which confer certificates at the completion of studies. Recognition or confirmation of such certificates depend on programs, methods and equipment being in accordance with the legal requirements established by the Union. The "Colegio Pedro II" is the typical secondary school serving as the standard institute for this branch of learning. Every State generally provides an official establishment of secondary instruction, but some of the States have more than one institution for the same purpose. The technical and professional education, though mainly within the scope of the federal lyceums subordinated to the Industrial Education Division of the National Department of Education, is also supplied by the States. Among the federated units, the State of São Paulo stands out

as having best developed this branch of instruction through a Superintendency of professional and home-economics teaching. In the Federal District the technical and professional courses are ministered in various institutes and in municipal technical secondary schools of recognized efficiency. The Federal Government is given authority by the Constitution to subsidize institutions of professional education established on the initiative of States, Municipalities and individuals or private or professional associations.

The Municipality of Rio de Janeiro maintains a number of institutions for commercial education. The majority of such courses, however, depends altogether on private agencies which are showing considerable progress in this field of didactic activities as a result of the teaching regulations therein introduced and rigorous control on the part of the Union.

Agronomy has as its principal organ of teaching the National School of Agronomy, subordinated to the Ministry of Agriculture, in the Federal District. In the States there are some traditional agricultural establishments such as Viçosa School, in Minas Gerais, and that of Piracicaba, in the State of São Paulo.

Primary instruction is prominently dependent upon the States which are also held responsible for the normal teaching in their territories.

### *NATIONAL INSTITUTE OF PEDAGOGICAL STUDIES*

The idea of creating a national organ for pedagogical studies was thought of several times by statesmen of the Empire. At the Constituent Assembly of 1823 it was suggested that an Institute should be established with the attribute to investigate the results of the instruction throughout the country.

Other similar projects were presented in 1826 and 1827. In Ruy Barbosa's "Parecer" (opinion) dated 1882, the idea came to light again under the form of a Pedagogium Museum "to state demonstratively the history, statistics and present position of education in all its grades, in the country or abroad". In the following year Franklin Doria advocated the creation of a similar organ to be called then "National School Museum", but, like the former attempts, it did not work.

In the early years of the Republic the "Pedagogium" was created (Decree N. 1,178 of December 23, 1892) to be "the propelling centre of reforms and improvements needed by national education". But it had to be an ephemeral institution. A Superior Council of Teaching was created (1911), which was next changed into a National Council of Instruction (1923) with the functions of a consultative organ of the administration.

The fact is that in 1917 the idea of a national centre for pedagogical studies reappeared in a project of Deputy Monteiro de Souza. But an institution of this kind was only going to have a legal status in 1937, upon the creation of the National Institute of Pedagogy by Law N. 378 of January 13 of the same year. Legal then, but not yet in effective existence.

In July 30 of the following year, by a Decree-law, President Getulio Vargas determined the establishment of the new organ which was to come into function under the title of National Institute of Pedagogical Studies. And, thanks to the efforts of the Minister of Education Dr. Gustavo Capanema, it was in fact installed a few days later and has ever since then developed intensive activity in the organization of its services.

Planned after similar foreign organizations the Institute consists mainly of documentary and reasearch services, to act as a "centre of studies of all edu-



cational questions related to the work of the Ministry of Education and Health. Its objectives are to organize the records and documentation concerning the history and the present study of pedagogical doctrines and techniques, as well as the different types of educational institutions; maintain interchange with national and foreign institutions; promote research work and enquiries into all problems affecting the teaching system, also into pedagogical methods and procedures; promote investigations in the field of psychology applied to education as well as in regard to the problem of professional guidance and selection; render technical assistance to state, municipal or private educational services; and divulge knowledge relating to pedagogical theory and practices.

Besides these functions of an essential nature, the Institute is intended to cooperate with the Administrative Department of Public Service by means of studies and other activities connected with the selection and training of federal public servants.

In addition to a Medical Biometrics Service, a Library and a Museum, the Institute has four technical sections specified as follows: Recording and Interchange; Enquiries and Research; Applied Psychology; and Professional Guidance and Selection.

While the existence of the Institute is but of a few months it has already carried out a series of interesting studies which will be divulged shortly through its publications. Outstanding in importance among such research studies are: the register or recording system of all the legislation of the twenty Brazilian states, the Federal District and the Territory of Acre, in all that refers to primary and normal teaching; organization of register and records of laws and decrees of the Colony, the Empire and the Republic dealing with education and subjects related thereto since 1808 to date; the enrollment of all Brazilian textbooks starting from colonial time; preparation of historical memorials and monographs on the different grades and branches of learning.

The Institute, with the cooperation of the Directorate of Statistics of the Ministry of Education and Health, is carrying on various investigations in connection with efficiency in public school; and in collaboration with the Division of Physical Education of the National Department of Education it carries on a series of measurements and investigations to determine the biometric constants of the country's secondary school population.

On the other hand, its cooperation with the services of selection and training of the public service rosters has been highly valuable and active. The Institute has already furnished technical bases for about twenty competitions of applicants to civil positions, it maintains a service for the guidance of such candidates, and organizes a complete survey of the biologic, psychologic and professional qualifications of the candidates to the various ranks of the public career. Through its Medical Biometrics Service have passed already five thousands candidates to positions in the civil service.

The National Institute of Pedagogical Studies has initiated also its service of interchange with educational organizations abroad, and intends to develop it by all possible means within its reach. The Institute will attentively and promptly supply any information to those concerned in educational matters of Brazil upon the receipt of request addressed to its Director, P. O. box 1,669, Rio de Janeiro.

The Brazilian Government, through the efforts of Dr. Getulio Vargas and the Minister of Education Dr. Gustavo Capanema, has given a new expression to the educational problems. The National Institute of Pedagogical Studies

is an institution placed at the service of such new spirit, which recognizes, socially, that education should meet the aims for the civic integration of the new generations as completely as possible; and, technically, that the educational procedure must be regulated, that is, submitted to a well planned study, to an orderly realization and to a repeatedly appraisal of its results, for constant correction and perfection.

*By Lourenço Filho.*

# PUBLIC DISBURSEMENTS FOR CULTURAL ASSISTANCE DURING 1935

FEDERATED UNITS	EXPENDITURE (IN MILREIS)			
	Federal	State	Municipal	Total
Territory of Acre.....	620,418	—	129,170	749,588
Amazonas.....	485,137	2,416,488	619,374	3,520,999
Pará.....	473,731	4,672,419	1,196,773	6,342,923
Maranhão.....	251,062	2,019,056	459,233	2,729,351
Piauí.....	695,973	1,642,911	697,732	3,036,616
Ceará.....	523,804	4,955,908	503,298	5,983,010
Rio Grande do Norte.....	187,059	2,582,413	204,890	2,974,362
Paraíba.....	471,977	3,354,061	474,571	4,300,609
Pernambuco.....	1,632,344	8,794,525	2,280,918	12,707,787
Alagoas.....	453,360	2,823,571	163,388	3,440,319
Sergipe.....	504,253	2,260,198	84,162	2,848,613
Baía.....	3,981,011	12,780,302	2,744,721	19,506,034
Espírito Santo.....	128,704	5,587,198	236,554	5,952,456
Rio de Janeiro.....	627,115	13,062,770	1,183,121	14,873,006
Federal District.....	42,953,708	—	54,687,954	97,641,662
São Paulo.....	1,218,089	103,143,456	9,389,599	113,751,144
Paraná.....	602,524	6,221,779	517,091	7,341,394
Santa Catarina.....	233,303	4,567,310	851,678	5,652,291
Rio Grande do Sul.....	3,515,135	18,717,361	6,351,511	28,584,007
Mato Grosso.....	246,146	1,930,055	224,772	2,400,973
Goiás.....	133,893	1,862,266	415,175	2,411,333
Minas Gerais.....	3,071,273	37,619,368	4,524,388	45,215,029
Not stated.....	18,251,170	—	—	18,251,170
<b>BRAZIL.....</b>	<b>81,261,189</b>	<b>241,013,144</b>	<b>87,940,073</b>	<b>410,214,676</b>

## MOVEMENT OF GENERAL PRIMARY EDUCATION

School units in 1935

GEOGRAPHICAL ZONES AND FEDERATED UNITS	INSTRUCTION							
	Total	ACCORDING TO NATURE			ACCORDING TO SOURCE OF SUPPORT AND MAINTENANCE			
		Pre-pri- mary	Primary		Public			Private
			Funda- mental	Comple- mentary	Federal	State	Municipal	
North								
Territory of Acre.....	68	—	68	—	—	22	39	7
Amazonas.....	598	18	577	3	—	558	—	40
Pará.....	1,126	8	1,116	2	—	848	—	278
Maranhão.....	405	6	396	3	—	202	145	58
Piauí.....	310	2	271	37	—	247	3	60
North-East								
Ceará.....	899	1	896	2	—	871	1	27
Rio Grande do Norte.....	493	—	467	26	—	310	—	183
Paraíba.....	747	6	738	3	—	595	—	152
Pernambuco.....	2,066	20	2,046	—	2	543	915	606
Alagoas.....	634	10	624	—	—	319	143	172
East								
Sergipe.....	397	1	396	—	—	294	48	55
Baía.....	1,789	42	1,720	27	—	1,514	—	275
Espírito Santo.....	873	6	848	19	—	706	57	110
South								
Rio de Janeiro.....	1,383	13	1,370	—	—	771	413	199
Federal District.....	1,197	155	970	72	17	—	280	900
São Paulo.....	6,117	142	5,821	154	—	3,871	1,034	1,212
Paraná.....	1,196	30	1,125	41	—	1,011	65	120
Santa Catarina.....	2,066	12	2,000	54	—	892	564	610
Rio Grande do Sul.....	4,966	13	4,840	113	16	1,213	2,773	964
Central								
Mato Grosso.....	368	3	362	3	—	229	38	101
Goiás.....	419	3	401	15	—	181	165	73
Minas Gerais.....	5,134	35	4,901	198	—	1,642	2,510	982
Summary	North.....	2,507	34	2,428	45	1,877	187	443
	North-East.....	4,839	37	4,771	31	2,638	1,059	1,140
	East.....	3,059	49	2,964	46	2,514	105	440
	South.....	16,925	365	16,126	434	7,758	5,129	4,005
	Central.....	5,921	41	5,664	216	2,052	2,713	1,156
BRAZIL	33,251	526	31,953	772	35	16,839	9,193	7,184

## MOVEMENT OF GENERAL PRIMARY EDUCATION

General enrolment in 1935

GEOGRAPHICAL ZONES AND FEDERATED UNITS	INSTRUCTION								
	Total	ACCORDING TO NATURE			ACCORDING TO SOURCE OF SUPPORT AND MAINTENANCE				
		Pre-pri- mary	Primary		Public			Private	
			Funda- mental	Comple- mentary	Federal	State	Municipal		
North									
Territory of Acre.....	3,831	—	3,831	—	—	1,884	1,711	236	
Amazonas.....	37,216	1,254	35,715	247	—	32,829	—	4,387	
Pará.....	74,672	325	74,207	140	—	60,188	—	14,484	
Maranhão.....	27,885	649	27,057	179	—	16,752	7,549	3,584	
Piauí.....	25,532	157	24,193	1,182	—	22,010	166	3,356	
North-East									
Ceará.....	63,873	20	63,789	64	—	61,699	40	2,134	
Rio Grande do Norte.....	39,707	—	38,212	1,495	—	26,785	—	12,922	
Paraíba.....	52,613	334	52,120	159	—	43,457	—	9,156	
Pernambuco.....	118,854	809	118,045	—	148	37,880	45,629	35,197	
Alagoas.....	41,824	1,270	40,554	—	—	26,952	5,505	9,367	
East									
Sergipe.....	21,594	165	21,429	—	—	16,419	2,186	2,989	
Baía.....	106,367	1,011	103,687	1,669	—	89,113	—	17,254	
Espírito Santo.....	51,478	364	50,031	1,083	—	43,609	2,236	5,633	
South									
Rio de Janeiro.....	134,888	2,434	132,454	—	—	96,867	23,705	14,316	
Federal District.....	213,082	6,170	203,354	3,558	1,897	—	141,290	69,895	
São Paulo.....	617,902	7,320	601,946	8,636	—	466,737	51,809	99,356	
Paraná.....	75,167	2,453	71,012	1,702	—	61,994	2,506	10,667	
Santa Catarina.....	108,811	681	105,385	2,745	—	60,447	23,164	25,200	
Rio Grande do Sul.....	279,873	591	271,794	7,488	1,491	103,345	111,058	63,979	
Central									
Mato Grosso.....	26,515	251	25,760	504	—	16,197	2,247	8,071	
Goiaz.....	26,793	135	25,874	784	—	14,451	8,947	3,395	
Minas Gerais.....	426,274	2,917	415,835	7,522	—	260,440	123,694	42,140	
Summary	North.....	169,136	2,385	165,003	1,748	—	133,663	9,426	26,047
	North-East.....	316,871	2,433	312,720	1,718	148	196,773	51,174	68,776
	East.....	179,439	1,540	175,147	2,752	—	149,141	4,422	25,876
	South.....	1,429,723	19,649	1,385,945	24,129	3,388	789,390	353,532	283,413
	Central.....	479,582	3,303	467,469	8,810	—	291,088	134,888	53,606
BRAZIL...	2,574,751	29,310	2,506,284	39,157	3,536	1,560,055	553,442	457,718	



## MOVEMENT OF GENERAL PRIMARY EDUCATION

## Teaching staff, in 1935

GEOGRAPHICAL ZONES AND FEDERATED UNITS	INSTRUCTION							
	Total	ACCORDING TO NATURE			ACCORDING TO SOURCE OF SUPPORT AND MAINTENANCE			
		Pre-pri- mary	Primary		Public			Private
			Funda- mental	Comple- mentary	Federal	State	Municipal	
North								
Territory of Acre.....	109	—	109	—	—	52	47	10
Amazonas.....	729	30	684	15	—	657	—	72
Pará.....	1,759	10	1,737	12	—	1,325	—	434
Maranhão.....	715	21	668	26	—	414	201	100
Piauí.....	499	4	445	50	—	388	5	106
North-East								
Ceará.....	1,349	1	1,340	8	—	1,278	1	70
Rio Grande do Norte.....	683	—	648	35	—	457	—	226
Paraíba.....	1,075	12	1,059	4	—	815	—	260
Pernambuco.....	2,710	25	2,685	—	2	867	968	873
Alagoas.....	843	20	823	—	—	465	144	234
East								
Sergipe.....	523	9	514	—	—	372	48	103
Baía.....	2,731	53	2,500	178	—	2,082	—	649
Espírito Santo.....	1,410	17	1,293	100	—	1,154	57	199
South								
Rio de Janeiro.....	2,708	87	2,621	—	—	2,003	422	283
Federal District.....	5,940	278	5,462	200	72	—	3,342	2,526
São Paulo.....	16,376	241	15,730	405	—	12,554	1,107	2,715
Paraná.....	2,083	70	1,905	108	—	1,647	66	370
Santa Catarina.....	2,777	13	2,579	185	—	1,340	570	867
Rio Grande do Sul.....	7,091	26	6,846	219	40	2,373	2,933	1,745
Central								
Mato Grosso.....	737	5	712	20	—	443	43	251
Goiás.....	714	8	635	71	—	361	194	159
Minas Gerais.....	12,147	150	10,865	1,132	—	7,327	2,596	2,224
Summary								
North.....	3,811	65	3,643	103	—	2,836	253	722
North-East.....	6,660	58	6,555	47	2	3,882	1,113	1,663
East.....	4,664	79	4,307	278	—	3,608	105	951
South.....	36,975	715	35,143	1,117	112	19,917	8,440	8,506
Central.....	13,598	163	12,212	1,223	—	8,131	2,833	2,634
BRAZIL..	65,708	1,080	61,860	2,768	114	38,374	12,744	14,476

**MOVEMENT OF EDUCATION IN GENERAL**  
**Summary of the various grades of instruction, in 1935**

CLASSIFICATION OF INSTRUCTION		School units	Teaching staff	General enrolment
TOTALS.....		36,662	91,542	2,862,616
According to source of support and maintenance	Federal.....	243	2,832	32,527
	State.....	17,268	43,019	1,616,451
	Municipal.....	9,348	14,239	567,079
	Private.....	9,803	31,452	646,559
According to nature of instruction	Ordinary.....	35,043	88,365	2,731,414
	Supplementary.....	1,570	2,992	128,115
	Institutional (1).....	49	185	3,087
According to type of instruction	General.....	33,938	73,740	2,677,912
	Semi-specialized.....	910	8,969	94,285
	Specialized.....	1,814	8,833	90,419
According to grades of instruction	Elementary.....	34,436	69,199	2,654,461
	Medium.....	1,806	17,243	173,981
	Higher.....	420	5,100	34,174
According to standard of instruction	Official or under official routine.....	27,879	70,898	2,317,340
	Free.....	8,783	20,644	545,276
According to purpose	Civil.....	36,583	90,598	2,854,106
	Military.....	79	944	8,510
According to categories of instruction	Primary.....	33,251	65,708	2,574,751
	Secondary.....	520	7,496	93,829
	Home-economics.....	462	1,320	28,397
	Technical and industrial.....	143	974	15,034
	Commercial.....	512	3,811	26,569
	Arts (2).....	459	1,081	10,740
	Teachers-training.....	373	3,785	18,316
	Higher.....	248	3,898	27,501
	Other branches.....	694	3,469	57,479

(1) — Education for the blind, deaf, mentally defective or delinquents.

(2) — Plastic, painting, music, dramatic, and kindred arts.

## MOVEMENT OF EDUCATION IN GENERAL

Summary according to Federated Units, in 1935

GEOGRAPHICAL ZONES AND FEDERATED UNITS	PRINCIPAL DATA					
	TOTALS			EXCLUDING GENERAL PRIMARY EDUCATION (ORDI- NARY AND SUPPLEMENTARY)		
	School units	Teaching staff	General enrolment	School units	Teaching staff	General enrolment
<b>North</b>						
Territory of Acre.....	81	146	4,410	13	37	579
Amazonas.....	644	1,016	40,573	46	287	3,357
Pará.....	1,186	2,248	79,232	60	489	4,560
Maranhão.....	434	1,013	30,068	29	298	2,183
Piauí.....	344	750	27,716	34	251	2,184
<b>North-East</b>						
Ceará.....	957	1,816	70,264	58	467	6,391
Rio Grande do Norte.....	530	914	42,054	37	231	2,347
Paraíba.....	780	1,320	55,383	33	245	2,770
Pernambuco.....	2,286	4,071	134,106	220	1,361	15,252
Alagoas.....	672	1,146	44,867	38	303	3,043
<b>East</b>						
Sergipe.....	418	715	23,677	21	192	2,083
Baía.....	1,909	3,768	119,398	120	1,037	13,031
Espírito Santo.....	910	1,711	54,635	37	301	3,157
<b>South</b>						
Rio de Janeiro.....	1,536	4,130	148,986	153	1,422	14,098
Federal District.....	1,777	10,959	279,887	580	5,019	66,805
São Paulo.....	7,204	23,240	701,007	1,087	6,864	83,105
Paraná.....	1,249	2,581	81,355	53	498	6,188
Santa Catarina.....	2,110	3,088	112,017	44	311	3,206
Rio Grande do Sul.....	5,196	8,923	296,064	230	1,832	16,191
<b>Central</b>						
Mato Grosso.....	394	975	28,868	26	238	2,353
Goiás.....	452	971	28,151	33	257	1,358
Minas Gerais.....	5,593	16,041	459,898	459	3,894	33,624
<b>Summary</b>						
North.....	2,689	5,173	181,999	182	1,362	12,863
North-East.....	5,225	9,267	346,674	386	2,607	29,803
East.....	3,237	6,194	197,710	178	1,530	18,271
South.....	19,072	52,921	1,619,316	2,147	15,946	189,593
Central.....	6,439	17,987	516,917	518	4,389	37,335
<b>BRAZIL.....</b>	<b>36,662</b>	<b>91,542</b>	<b>2,862,616</b>	<b>3,411</b>	<b>25,834</b>	<b>287,865</b>

**MOVEMENT OF GENERAL EDUCATION**  
Retrospective summary for the 1932-1936 period

SPECIFICATION		INSTRUCTION		
		General primary (ordinary and supplementary)	Other branches	Total
School units.....	1932.....	27,662	2,286	29,948
	1933.....	29,553	2,877	32,430
	1934.....	30,733	3,219	33,952
	1935.....	33,251	3,411	36,662
	1936.....	35,561	3,549	39,110
Teaching staff.....	1932.....	56,320	19,705	76,025
	1933.....	57,645	22,100	79,745
	1934.....	60,186	24,543	84,729
	1935.....	65,708	25,834	91,542
	1936.....	68,896	27,273	96,169
General enrolment..	1932.....	2,071,437	202,776	2,274,213
	1933.....	2,221,904	244,188	2,466,092
	1934.....	2,408,446	268,310	2,676,756
	1935.....	2,574,751	287,865	2,862,616
	1936.....	2,749,090	314,432	3,063,522

## LEARNED SOCIETIES

A COUPLE of literary shools or guilds founded in Rio and Minas at the time of the Viceroy's in the eighteenth century are undoubtedly the earlier influences towards the institution of cultural societies other than universities, museums, libraries and scientific institutes already considered under different headings elsewhere in this volume.

Within the last hundred years there has developed in this country a large number of institutions entirely devoted to aid in the advancement of knowledge and to increase generally the learning and culture of the Brazilians. The "Instituto Histórico e Geográfico Brasileiro do Rio de Janeiro" is exactly a century old organized society, the first that engaged in active research on everything relating to history and geography, including the study of ethnology and sociology of Brazil. The Institute was founded on October 21, 1838, under the immediate patronage of H. I. M. Dom Pedro II, and its "Review" or "Journal",



then established, continues to circulate, at present as the "Revista do Instituto Histórico e Geográfico Brasileiro". This is a remarkable publication containing the most interesting cultural material. "It is grandious for the lessons where-with it contributes to the history of Brazil. It publishes private letters, biographies, inedited memorials, studies, documents copied from the most important archives of Portugal, Spain, France and Holland, and contributes also to our geography by divulging highly valuable studies about the old captaincies, provinces, its inhabitants, etc. The *Revista* has still room for the proceedings of the meetings of the Institute, for the speeches of the President and others, the annual report of the 1st Secretary, the roll of members, list of printed works, manuscripts, charts and antiquities".

The Institute was indeed the definite leading torch in the awakening of the intellectual life of the Nation after the Independence, opening a broad avenue to research and study on many literary and scientific enterprises. Today, about 80,000 volumes, 50,000 manuscripts and 3,000 systematically classified charts are housed in the Institute's Library, which is open daily to specialists and investigators and to the public in general.

The ethics and methods of this association received official sanction and have been carried on along exhausting but fruitful labours that distinguish it in the field of letters, chiefly as a favourite source of historical information. It stands unrivaled in interest and perfection of the service performed for the country, both so secular and illuminating that other allied organizations have sprung and developed everywhere in and beyond the scope of the Institute.

Next in order of antiquity of the Brazilian learned societies we may refer the "Provincial Institute" that sprang up in Baía, in 1856, and the "Instituto Histórico e Geográfico da Provincia de São Pedro", four years later in Rio Grande do Sul, both of which have disappeared to give place afterwards to younger institutions with the same objectives and pursuits. The year 1862 saw the establishment of the "Instituto Arqueológico e Geográfico Pernambucano", now "Instituto Arqueológico, Histórico Geográfico Pernambucano", and, in 1869, the "Instituto Arqueológico e Geográfico Alagoano" was founded in Maceió, State of Alagoas, whose denomination was changed in 1931 to "Instituto Histórico de Alagoas". Between 1883 and 1896, there were founded, among others of minor importance, the following learned institutions: "Sociedade de Geografia do Rio de Janeiro"; "Instituto do Ceará"; Instituto "Histórico e Geográfico de São Paulo", an outstanding institution to which the State of São Paulo owes much of the enlightenment on its historical movement and events since the small settlement of Piratininga to the exponential position of today; "Academia Cearense de Letras", in Fortaleza, Ceará; "Instituto Geográfico e Histórico da Baía"; "Academia Brasileira de Letras", which came in national eminence for promoting general culture; "Instituto Histórico e Geográfico de Santa Catarina"; and the "Instituto Histórico e Geográfico do Pará".

The twentieth century, in turn, since its beginning to our days, has seen the foundation of nearly forty influential learned societies throughout the country, such as Institutes, Academies, Societies, Federations and others whose services in the historical and scientific field of letters are extremely important. All of them have been contributing with immediate uses and applications within very significant reach of workers and of all who turn their talents towards the deeds and dreams of the creative forces and their relation to human prosperity.

## TECHNICO-SCIENTIFIC INSTITUTES

THE movement of these services appears in individual specific statistics conforming to the different purposes for which the institutions are designed as informative, guiding and research centres for studies of a specialized nature.

Among the institutes in the group under consideration, the "Observatorio Nacional do Rio de Janeiro", created at the time of the first Empire (1827), stands out for its antiquity and traditions. Among those more recently created, special mention should be made of the "Instituto Oswaldo Cruz", which, under the name of "Instituto Sorotherapico de Manguinhos" was organized in 1899 by the Municipality of Rio de Janeiro, with the end in view of preparing sera for the control of bubonic plague. After having been transferred to the Federal administration, the establishment proceeded its increasing efficiency in the various ways towards which the activities were directed, both in the field of scientific investigation and in training specialists. So it became an institution of world-wide renown for its advancement in research work and relevant services rendered to Brazil and to the medical science in general.

## LIBRARIES

THE Ministry of Education is earnestly devoting itself to incrementing as much as possible library activities in the country.

In 1912 the total of 456 libraries existing in Brazil comprised a number of institutions founded before 1821, among these being included the National Library, organized in 1810, and that of the Carmo Convent, dating back to 1545, both of them in Rio de Janeiro, those of the Benedictine Monasteries in Rio, Baía and Pernambuco, all founded late in the XVI century, and that of the Archiepiscopal Seminary at Mariana, open since 1748.

In 1929 the libraries numbered 1527, and their bibliographic contents were then estimated at about 9,100,000 volumes. Six years later, in 1935, the number of such institutions ascended to 2,312 not including the libraries of primary schools which have been the object of a special enquiry. Of the aforesaid total 180 were opened to the public in general, 1,025 belonged to establishments of secondary and higher education and 946 were annexed to private corporations.

The book problem is being faced by the Ministry of Education and Health under a threefold essential aspect: official book production, incrementing of private editions and the training of librarians. In order to arrive at the last aim the Ministry is assisting various enterprises set up in the States, and intends further to expand its actuation in this sphere. The National Library, which compulsorily collects all the books issued in the country and those among the best published abroad, is being completely remodelled. The "Casa Ruy Barbosa", where the magnificent library that belonged to the famous orator and jurisconsult is housed, is being taken care of as a national reservation.

The National Book Institute, created to serve those three aspects of the book problem, intends to intensify the institution of popular libraries, it being a purpose of its governing members to promote, as soon as possible, a National Libraries Convention planned conveniently to discuss the matter and to lay down a uniform routine for the whole country. On the initiative of this Institute, a great exhibition of Brazilian books will be held in Montevideo in the near future.



## MUSEUMS

**T**HE Ministry of Education and Health is greatly interested in stimulating the creation of museums and in developing those already existing in the country. Prominent among the latter are the National Museum of Rio de Janeiro, instituted in 1808 by João VI, where rich archaeological and natural history collections are preserved, the National Historical Museum, created in 1922, the year when the first century of the Independence of the country was celebrated, both located in the Capital of the Republic and maintained by the Federal Government.

Special mention should be made of the Emilio Goeldi Museum in Pará, the Ipiranga Museum in São Paulo, the Pinacotheca and the Museum of the State of Baía, the Julio de Castilhos Museum in Rio Grande do Sul, the Regional Museum of Olinda in Pernambuco, and some private establishments notable for their treasures of religious art, as, for instance, that of Mariana, in the State of Minas Gerais.

In 1936, 148 institutions of this kind were recorded in 24 Brazilian Municipalities, out of a total of 1,384 Municipalities which have responded an enquiry carried out by the Ministry of Education and Health. These figures, however, which will be added later to the returns obtained through the same enquiry from the remaining 95 Municipalities, do not include the museums annexed to educational institutions to be found all over the country.

The Ministry of Education intends to carry out its plans of instituting six more official museums in the next few years: the Gold Museum, designed for preserving all the reminiscences of the early gold exploitation in Brazil; the Santos Dumont Museum, in the old city of Palmira, State of Minas Gerais, to be installed in the house that belonged to that great Brazilian inventor; the Inconfidence Museum, in Ouro Preto, Minas Gerais, already created by law; the Imperial Museum, in Petropolis, in the house that belonged to Dom Pedro II, in which the relics and mementos connected with the occupation of the Brazilian throne by its two Emperors will be kept; the Missions Museum, in Rio Grande do Sul, which is being organized to serve as a documentary centre of the Jesuitic missions; and, finally, the National Museum of Moulds, designed to receive direct mouldings in gypsum of all the works of the history and art patrimony of Brazil.

## LITERATURE

**I** REPEAT what I wrote fifteen years ago: Brazilian literature does exist but is not alive,—for, a literature that lives cannot be ignored by the average learned man. Thus we see some histories of the world's literature that do not even speak of ours, such as that of John Macy, which has been thought necessary to translate into our language in spite of its mediocrity.

It is mediocre, however, not because it ignores the existence of our letters, but because intrinsically it has little value. As to being silent about our letters, this would be perfectly deserved if, at the same time, it did not occupy itself so extensively with the North-american literature, which only very recently has

been included in the literature that a learned man cannot ignore and, even so, only through very few of its numerous representatives.

Though our literature does not as yet constitute a distinct chapter deserving inclusion in a compendium of world literature,— yet it might get along with its South-american similars into a history of such literature, and it does not fail to have its own physiognomy.

We are a people eminently gifted with literary talents and with a vocation for spiritual matters. The Brazilian, like every Latin in general, is more inclined to spiritual things than to practical activities. We are naturally far more poets than economists. We have a more spontaneous sympathy for activities of the imagination than for those requiring a considerable application to concrete and positive things. In literature we are more easily led to poetry than to prose — And in prose, naturally more to romance than to criticism, history or erudition. We are weak erudites and superficial criticisers, more romantic historians than moralists, men of letters more than humanists. Our literature repeats, as it always did, the character of our national psychology. And whatever there is of *un-formed* or *in formation* in the Brazilian spirit it is repeated over the pages of our books or in stanzas of our poems. Far more subjective than dialectic, we love the facile nature that surrounds us and from it we convey to our books the invitation to easiness and to superficiality. Unable to endure patient labours, we possess, however, something profoundly *human*, which will be the future sap of tomorrow's tree, as it is already today the living blood that feeds the fragile organism of our letters.

The most perfunctory examination of our literary history shows in it a *continuous enrichment*. If it was in *romanticism* that we attained the initial expression of literary independence and also the few of the notes which *thus far* represent (and perhaps for ever) what is most typical in our literary originality,— unquestionably the course of our letters today shows a scope, a volume, a range that it was far from having a century ago. We publish now in a week what we did not publish then in 4 months. Let us run through the weak reviewing sections of the papers of the time and we will see the general disinterestedness for the literary subject and the rarity of the publications. It was in a desert that romanticism laid down its most sonorous song. There is such a deafening din that, now-a-days, the most delicate voices can hardly be heard.

Quantity, only? I do not believe it. More and better is published today. And in all fields. Collections of Brazilian studies such as "Brasiliana" of São Paulo, so suspicious and unilateral from a certain point of view, acquire within a few years more than 150 volumes and with works of unquestionable and lasting value. The research which is now being made, for instance, in relation to the memory of Dom Pedro II and, in general to the Independence, is a great achievement. Many are the editors but the authors are always complaining of "finding no editor" — an evident sign that the public is becoming a reading public and also that the creative sense is being stimulated. I know well that the level of reading is not encouraging. The Public Library of Maceió (State of Alagoas) publishes, for instance, a very interesting bibliographic bulletin showing the monthly movement of its consultations. This if imitated by the other States would afford a curious demonstration of the cultural level of our readings. In Maceió, it is not encouraging. The works consulted are in an impressive majority second class romances in worthless translations. Such surveys, however, are of little value, because we are still in the phase of private libraries. And books are sold more and more in spite of their absurd cost.



However, it is not only in quantity that all of our literature is growing. The average quality of the production, as far as I can see, is today higher than ever at any moment of our short literary history. In anyone of our great collective literary movements — which here have always reflected the literary evolution of France and Portugal — we do find a few projecting names, some of them being immortal to us and yet a mass of mediocre works, which become unreadable a year after having been published.

Of the two first centuries of the Colony, apart from the documents of strictly historical value, only one name is saved — that of the poet Gregorio de Mattos. And about him, a few years ago, when the Academy of Letters proceeded to publish his complete works, it was seen that only half a dozen of them were worthy of being retained, notwithstanding a certain intrinsic value and considerable historical importance of many others. Such historical value is what indicates the level of our literary emancipation.

Countries like ours, which were born and bred from the transplantations of an alien civilization, and not by the organic growth of own evolution, have always considered in their letters a larger or smaller degree of independence. That is why romanticism, which started amongst us around 1830, as in Europe (of which it was a transatlantic reflex), has for us the value of a proclamation of Independence.

In poets as Gonçalves Dias, Fagundes Varela, Alvares de Azevedo or Castro Alves, in romanticists such as José de Alencar or Bernardo Guimarães, what we feel is the blossoming of our collective soul, expressing itself in its own language, with certain already unmistakable psychologic touches and revealing the *New Man* on the shores of the Southern Atlantic.

When Naturalism, which succeed Romanticism, again took the rhythm of our literary pendulum to the cosmopolitan influences and to the European thought of the century of science — it found already a stronger and better-formed nation, capable of resisting the new international fertilizing winds. And symbolism was going to bring in a new spiritual spring in accord with the profound and traditional tendencies of our Lusitanian formation, at the close of the last century and the beginning of the present century.

With the XX century there was a movement of apathy or expectancy, in which the voice of literature seemed to be hushed by the republican material progress or by the mediocrity of the historical period in which we were living.

On the death (1908 and 1909) of the two greatest representatives of our letters in the two contributing sources whereinto they are divided — that of supremacy of man over earth, with Machado de Assis, and that of supremacy of earth over man, with Euclides da Cunha — it appeared that we were entering an era of indistinction and indifference which prevailed more or less till the European war, when the *revolutionary spirit* shook Brazil both in politics and in literature. The literary revolution preceded the political one.

And since then Brazilian letters took on a new development.

*Modernism* has developed, as in every part of the world, against the aesthetic routine. And, as always, it produced fewer works than stimuli. Its action was more direct and secret than immediate and direct. And the unquestionable outburst of our present day letters, both in poetry and in romance, or in historical letters, is undoubtedly due to such a deep *shock* which modernism provoked by the voice of men, such as Graça Aranha, the friend of Joaquim Nabuco, who, though son of a past generation, came to exert influence upon our

own, or as Ronald de Carvalho, son of our generation and whose life as a poet and prose writer was a mark of our modern letters, so early interrupted by his death.

I usually say that just now we are on the *post-modernistic* phase, since all the immediate characteristics of the anti-routine reaction disappeared and a productivity extending to all literary branches arose, though rare are the fruits likely to last long.

In History, we see names such as Rodolph Garcia, the greatest living authority on Brazilian affairs; Affonso Taunay, the historian of the "bandeiras paulistas" (pioneer settlers of the hinterland) and recently the re-discoverer of Bartholomeu de Gusmão (the Brazilian forerunner of aerial navigation in the XVIII century), Pedro Calmon, Heitor Lyra, Tobias Monteiro, Vilhena de Moraes, Jonathas Serrano, and a younger generation of historians avid of positive studies and profound in criticism and epigram, as Eremildo Vianna and Guy Hollanda. In social sciences we have sociologists like Gilberto Freyre, a student of northeastern life; Oliveira Vianna, the strong evocator of the formation of the Brazilian people; José Maria Belo, Carlos Delgado de Carvalho, geographer and sociologist, Pontes de Miranda, jurist and sociologist, and others of various currents of thought, but all markedly engaged in the study of the *Brazilian reality*. The recent organization of the *Society of Brazilian Studies*, specially devoted to this end, falls within such broad nationalistic trends of our historical and social letters, and, to a certain extent, of our letters in general.

In *Romance*, which is the "modern epopoeia", it is customary to divide our most recent production into a *northern* current and a *southern* current. The former is inspired on the earth, of neo-naturalistic inspiration, reflecting environmental manners, social problems, external nature, and having acute local spirit, with romanticists such as — Afranio Peixoto, José Americo de Almeida, José Lins do Rego, Jorge Amado, Graciliano Ramos, Fran Martins, Mario Sette, Raquel de Queiroz, Omer Mont'Alegre, etc, etc. The southern current is prominently of psychologic interior, mental, studying moral problems of a broader character and of more universal and human inspiration, and revealing romanticists like Lucio Cardoso, Cornelio Penna, Octavio de Faria, José Vieira, Plinio Salgado, João Alfonsus, Ciro Costa, Erico Verissimo, etc.

In Poetry, the enterprisers of the modernistic reaction dominate, as Manuel Bandeira, Mario de Andrade, Tasso da Silveira, Alvaro Moreyra, Guilherme de Almeida, Ribeiro Couto, Cassiano Ricardo, Menotti del Picchia, and others. And those of the latter generation, or of more recent and post-modernistic tendency, as Augusto Frederico Schmidt, Murilo Mendes, Jorge de Lima, Paulo Correa Lopes, Willy Lewin, Emilio de Moura, Austen Amaro, etc.

In philosophy, yesterday as today, Brazilian mind is very poor. Those defects, previously pointed out, on impatience and superficiality, added to a frankly defficient organization of studies, wherein, up to now the *inexistence* of all philosophic or superior humanistic education was prominent, creating and feeding auto-didactism,— do not permit fixing in an ever-lasting achievement disciplined philosophic thought. What we see is, therefore, in all fields of thought, our thinkers going up no higher than an easy level.

It should be, then, too early to make any inventory along these lines, though we may say that Bergson's thought introduced here by Farias Britto has found a field of frank sympathy and welcome. And the scientism of the last century



is in absolute disprestige as we have just seen in a volume of essays of the physiologist Miguel Osorio de Almeida.

In Criticism, at last, we have brilliant spirits such as Agripino Grieco, or of vast culture and taste as Affonso Arinos de Mello Franco, among whom is enlisted a group of militants or amateurs worthy of interest, as Luiz Delgado, Andrade Muricy, Prudente de Moraes Neto, Sergio Buarque de Hollanda, Oscar Mendes and others.

These notes, which are jotted down with no other purpose but to give a very brief and even more defficient notion on the present status of our letters, with slight historical projection, — reflect only a very firm belief that Brazilian literature is *growing*.

I am among those who hold that a man may be *cultured* without knowing that fact. But I also sincerely believe that our literature is by no means on the wane, on the contrary, it presents signs of progress and ascension, both in quantity as in quality.

Let us be conscious of our relativity, but without the least degree of pessimism.

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By Alceu de Amoroso Lima.

## PAINTING

I DO not know if now is the right time, out of curiosity, to do a little research work in Brazilian painting, or rather to investigate the art itself, so as to discover the influences brought to bear on same, and which have, or otherwise, affected it during the last twenty years. I admit this is no easy task, but one full of difficulties, some of a technical, others of a moral and some even of a social order.

In a general way without being able to exactly fix the years, one may conveniently say that from 1816 to 1916 National painting lived exclusively under the school discipline having its origin in official French teaching. This was the academical influence which our travelling scholarship artists acquired over there and, on returning, religiously practised here.

They just had to do so because everybody believed that it would only be possible to innovate in Europe, and for us such innovation would only be acceptable after having been filtered by the French masters of the School of Fine Arts in Paris. Now said filtering process sometimes took thirty years, as far as we were concerned.

It naturally follows that we were always practising "novelties" that were so in name only, being really old ideas! The truth of the matter is that, when there really occurred some very daring renovation in the plastic arts, it never reached our shores; and teaching at a distance does not easily produce flourishing results. Thus it was with the realism of Courbet, the impressionism of Monet, and the divisionism of Seurat. It is true that we must, of course, make a deserved exception for the art of Elyseu Visconti, who in 1900, introduced amongst us impressionist manifestations, free airs, pursuant to the features derived from divisionism.

But the "modernist tendencies" — which were thirty years old — (dating from 1872), did not manage to penetrate modern teaching, *i. e.*, the official teaching of the country, neither did they have any alert followers enjoying good artistic prestige. It was necessary to wait for the Marques Junior and Henrique Cavalleiro travelling scholarships, granted respectively in 1916 and 1918, for the impressionist technique, which is the principal renovation in the art of painting on record during the last two centuries, to become a part of the patrimony of Brazilian art and incorporated in National artistic sentiments.

Thus when said technical and esthetical reality finally becomes nationalized, impressionism, in the Henri Martin style, is already one of the *classics*. And against aforesaid artistic discipline other tendencies sprang up with anarchical violence derived from the disorderly influences of the Great War, surpassing *Fauvism* and even *Cubism*, the last named school of painting having been born here shortly before the outbreak of the Great War.

In this way, although a little faster, the art of painting followed the same routine which it had been following for a century.

Thus it would not be out of chronological order to fix 1916 as the year in which the first symptoms made themselves manifest in Brazilian artistic sensibilities, indicating that other processes were about to be adopted in the rate of procedure of the art of painting, forcing same to proceed in an almost precipitate manner which would have unforeseen and disconnected results. In 1936, said initial movements of anticipation had been on their way for exactly twenty years. This term, although very short for the profound study of an artistic event, is, however, sufficient for the examination of a tendency which really did not try to go deeply into any matter, but sought to give everything a provisional character, a mode of procedure actively combated by the art critic Camille Mauclair, who went so far as to denominate it *The Living Art Farce*, in a book which he wrote with this title. Besides said work, the above mentioned art critic printed various articles in the Rio morning daily "O Paiz", cognizance of the matter thus being given to all those who follow art questions with interest.

In my turn, and in the same great morning daily, when necessary and proper, I sometimes came out with an article in favour of aforesaid innovations, convinced, as I still am, that life is a constant renovation and that whatever is not renovated, dies. Besides this I always felt that nature is infinite in its interpretation: what we know through art or science is no more than a very small part of the knowledge which we are trying to obtain.

Naturally such an opinion can never be confounded with the disguises and inability, nor with the lack of experience or inaptitude, of those who used said liberty in interpreting the meaning of life, to show how sadly and how far they were from the truth.

A mind free from preconceived opinions will see at once, in a kind of spiritual retrospect, that among those who lived in days gone by there were some great artists, and will comprehend that it is also possible to admit this to be true as regards the present age.

Art is in a class by itself: in old matters there is much that is new, and nowadays, among the Futurists, there are many old artists who, even in those far-off days would have been worth nothing.





*A Partida da Monção (The pioneers start).* — A painting by Almeida Junior



## OFFICIAL EXHIBITION OF FINE ARTS DURING THE 1934-1938 PERIOD

SPECIFICATION		RESULTS				
		1934	1935	1936	1937	1938
Number of artists figuring in the exhibition	TOTAL.....	205	211	225	209	213
	According to sex { Men.....	165	165	177	155	155
	{ Women.....	40	46	48	54	58
	According to nationality { Brazilians.....	192	194	198	177	179
	{ Foreigners.....	13	17	27	32	34
Number of works on exhibition	TOTAL.....	413	429	410	326	396
	According to the sex of the authors { Men.....	336	342	312	240	300
	{ Women.....	77	87	98	86	96
	According to the nationality of the authors { Brazilians.....	384	390	360	270	332
	{ Foreigners.....	29	39	50	56	64
	According to the artistic divisions { Painting and drawing.....	321	325	326	252	305
	{ Sculpture.....	38	38	29	31	48
	{ Architecture.....	2	—	3	3	—
	{ Engraving.....	52	52	30	25	20
	{ Applied art.....	—	14	22	17	23
Number of prize winning artists	TOTAL.....	52	40	47	22	41
	According to sex { Men.....	40	30	37	14	34
	{ Women.....	12	10	10	8	7
	According to nationality { Brazilians.....	48	35	41	20	25
	{ Foreigners.....	4	5	6	2	16

Note—Only the exhibitions held at the National School of Fine Arts, in the Capital of the Republic.

## MUSIC

WHEN the Jesuits came to Brazil, in the first century of the Colonial Period, they did not forget to bring music with them, which would serve as a very active element of propaganda and catechising.—Religious music, simple enough, specially the plain-chant and, at most, some little polyphonies, called by the chroniclers of that age “organ songs”, to make use of the mediaeval word. It is also known that, for a greater efficiency of catechising, they added to said music, in the representations, some traditional songs of the Indians, keeping their melodies, but giving them a Catholic



text. With the development of the Colony, aforesaid religious music was greatly enriched and totally dominated the Colonial music. If during the XVII and XVIII centuries the erudite-profane music had a lot of curious manifestations, principally in the theatres of the most important urban centers; if in the recess of the families some good music was heard, of which fact we have a proof in the references made to the musical instruments, very rarely encountered in the respective inventories or other documents, it was the Chaplains, it was the Churches, it was the sopranos of the Royal Chapel of Dom João VI that gave Colonial music a tone of greater permanence and splendour. This predominance of religious music brought forth the formation of the first great National composer, the Priest José Mauricio. His music, very correct and of great purity of inspiration, has worthy exemplars of the religious European music of that time.

José Mauricio died just at the beginning of the Empire. Since then religious music began to lose little by little its pre-eminence. Francisco Manoel, the author of the National Anthem, is, perhaps, the musician of greatest social importance we have had. His actuation was decisive in the musical development of the country, creating the Conservatory of Music (1841), our first official school of the kind, and the Academy of National Opera (1857). It was in the last named institution that Carlos Gomes presented his first theatrical rehearsals. Dom Pedro II had decided to create those two institutes; it was he too who decided the destiny of our first musical genius, sending him to Europe in order to study. Carlos Gomes went overseas and won abroad a well deserved international fame, principally with the world famous operas "Guarany" and the "Salvador Rosa". These, however, are not his most important operas; the best ones are, indeed, the admirable "Fosca" and the "Slave", written after his definitive return to Brazil. But, in spite of the nationalist efforts of Carlos Gomes, it was still too soon for Brazilian music to be shown under its proper characteristics, unconfusedly National. A long erudite tradition did not yet nourish it, nor had there been formed among the people that musical folkloric basis on which such music might be inspired. At last, this popular music of ours was rapidly being formed and fixing its main characteristics. Some composers, chiefly Alexandre Levy, of the South and Alberto Nepomuceno, of the North, inspire themselves in it, producing pieces of notable importance, as the "Samba", of the former and the "Batuque" of the latter, both for orchestras. Other composers, however, such as the symphonists Leopoldo Miguez, Glauco Velasquez, Francisco Braga and the admirable Henrique Oswald, who dedicated himself specially to drawing-room music, do not try, with the same confidence, to nationalize their compositions, being taken up by an easier and more vague internationalism of inspiration. With them we are already in the Republican phase. Our popular music had just begun to impress Foreigners and Natives with the exceptional beauty of its melodies and abundance of rhythms and forms.

When the war of 1914 was over, the political ideas of socialism and nationalism, ruling the world, came to rouse in our erudite composers the desire of nationalizing their work and observing the popular sources. There occurs, then, in the country, the first musical movement worthy to be called a "school". A pioneer of this National school and its most important figure is the composer Villa Lobos, whose works have already attained international fame. His "Choros", "Serestas" and several other works are really an extraordinary fountain of beauties, musical pieces of every kind and of a National character. And, having this great composer as its central element, National music has no rival in South America, principally in production.



Lourenço Fernandez, author of "Batuque" and "Reisado", Francisco Mignone (a first-rate regent and author of the masterpiece "Maracatú de Chico-Rei"), Barroso Neto, Camargo Guarnieri, Guattali, Luiz Cosme, Jaime Ovalle, Souza Lima and others, also deserve special mention.

Instrumental and choral groups are created under the protection of the State. The Cultural Department, of São Paulo, is trying out the first scientific studies of musical folklore, and is making an incomparable collection of National phonograms.

Musicology and criticism reach, sometimes, a very high degree with Furio Franceschini, Sá Pereira, Luiz Heitor, Itiberê da Cunha, Bevilacqua, Andrade Murici. National music is indeed in a splendid period of prosperity; and, together with the literary arts, it offers to the world what Brazilian intelligence can show of its most artistical and beautiful treasures, at the present time.

*By Mario de Andrade.*

## THEATRE

THEATRE was the first of the arts to manifest itself in Brazil. As a social art, it was immediately utilized by the colonizers in the spiritual formation of those inhabiting the new land. We find it thus planted by the laborious hands of Anchieta himself in a still primitive midst and as an instrument of education and recreation. In 1565 Brazil had its first theatrical performance. There were represented the "Autos" and "Misteries", which the devoted missionary created by using common elements of tradition in the feasts of the Indians, in order to best touch them with the moral examples he wanted to teach them. His was a notable part in giving us the first manifestation of theatrical art in that fragile São Vicente Theater built of wood and improvised in the churchyard with its simple platform, "around which vegetable festoons, formed of climbers and odoriferous parasites were growing", as referred by Mello Moraes Filho.

Until the seventeenth century, the influence of that primary theatre was deeply felt. However, it is only upon the appearance of Manuel Botelho de Oliveira, a bahian, born in 1636, that the theater, with its comedies, otherwise written in Spanish, takes up a different tone, though somewhat prating and eucumbered with a greasy rhetoric.

The eighteenth century was richer in contributions to the formation of the Brazilian theatre. In 1705, Antonio José da Silva is born in Rio de Janeiro. His accidented life did not impede his leaving a greater amount of theatrical gems, comedies written during spare hours, which form the most notable theatrical patrimony until that time, it coming to substitute definitely the "Autos" and "Misteries" tradition.

The life of Antonio José, the "Jew", is a succession of sufferings arising from the suspicion of Judaism that fell over his family. Still as a youth Antonio José was banished to Portugal by determination of the Holy Office. There he was brought up, arrested and many times tortured by the Inquisition. He died burnt in 1739. His is an achievement of relatively large proportions in which "A Vida de Dom. Quixote" (The life of Don Quixote), "Ezopaida", "Amphitryon", "The Labyrinth of Crete", "As Guerras de Alecrim" and "Mangerona" (Marjoram) are prominent.

Whilst the work of that Brazilian was being given to light and growing big in Portugal, only later on, when it became known and divulged in Brazil, at Vila Rica, where Alvarenga Peixoto and Claudio Manoel da Costa were trying to give the Brazilian theatre an elevated work of classical taste. Alvarenga Peixoto left us a translation of "Merope" of Metastasio, and "Enéas no Lacio" a drama in verse. Claudio Manoel made several translations from Italian authors and a number of dramas.

An event also of great significance to theater life in the eighteenth century is the foundation of "Casa da Opera" (Opera House) by Father Ventura, which lasted from 1767 to 1769, and where Antonio José's plays were performed.

It is, however, with Domingos José Gonçalves de Magalhães that the dramatic theatre is brought out for the first time. A circumstance most favourable to success helps him at the time, for it was then that the first great Brazilian author, João Caetano dos Santos, came into evidence.

Gonçalves de Magalhães contributed with his dramatical endowments to the formation of literary genre, with an authentic value in the composition of the plays, something that was not done before. Born in 1811, his life was a placid sea-voyage due to the positions and honours he received to the extent of being Ambassador of Brazil in Rome. His plays were: "Antonio José or The Poet an Inquisition", an homage to the memory of the great sacrificed, and "Olgiatto", a play dealing with an Italian affair. João Caetano was the admirable interpreter of Antonio José, and this procured him, as well as Gonçalves de Magalhães, the consecration of his contemporary public.

Whereas Gonçalves de Magalhães was giving preference to dramatic genre for his creations, there appeared, in comedy, Martins Penna, born in 1815, a poet, romanticist and criticiser who died at the age of 33, in 1848. He produced a great deal and his works represent the first step for the establishment of a characteristic theater, in the sense of observing the environment in the theatricalization of the typical features of the time.

As a matter of fact, with Martins Penna begins the theater of a Brazilian character. His most splendid plays were: "O Juiz de Paz da Roça" (The Rustic Judge of Peace), "O Noviço" (The Novice), "Os dois" (The Two), "O terrível Capitão do Matto" (The terrible Captain of the Woods), "O Jogo de Prendas" (Game of Forfeits), etc.

The theater was not disregarded by writers who found in other genre their force of expression. Thus romanticists as Machado de Assis, José de Alencar, Joaquim Manuel de Macedo, gave it a little of their curiosity without any greater consequences.

At the very same time Arthur de Azevedo and França Junior were meeting a great success with their plays. Of França Junior, whose satire to society are even now appreciated, outstand: "As Doutoradas", "Tres Candidatos", etc.

The end of the nineteenth century was prolific in comedy, there having contributed with productions of greater success Moreira Sampaio, Arthur Rocha, Coelho Netto, Luiz Guimarães Junior and others.

The next generations, which would form the theater of the twentieth century continued the tradition genre which is till then maintained and finds lasting acceptance on the part of the public.

Armando Gonzaga, Abadie Faria Rosa, Claudio de Souza, Paulo Barreto, Goulart de Andrade, Benjamim Lima and others have masterfully and applaudedly cultivated the comedy. It is from this line of evolution that came out those who are today continuing to give theatrical art their effort and hopes, young fighters, like Joracy Camargo, who had with his "Deus lhe Pague" (May



God pay you) his greatest success; Ernani Fornari, the applauded author of "Nada" (Nothing) and "Yayá Boneca"; Eurico Silva, actor and author of "Pense Alto"; R. Magalhães Junior, the youngster but victorious among comedy writers, to whom are added Renato Vianna, imbued with a high ideal; Oduvaldo Vianna, whose works are already known abroad; Viriato Correa, Alvaro Moreyra, José Carlos Lisboa, Paulo Magalhães, etc.

To such an effort one may well add the rôle played by Dulcina de Moraes and Procopio Ferreira, two of the most praised interpreters of and inciters to comedy, wherein they enjoy continuous triumph of rare brilliancy.

Only scenography has not developed alongside the other stage elements in Brazil. It is still found in a primary state and no accomplishment of prominence can be attached to it. That which once was unprotected and given up to the hazards of the box-office indeed, though its high purposes as an element of education and culture, has now, on the part of the Public Powers, the deserved support of a law. This law created the National Theatre Service.

The cooperation of the new institute may bring into the Brazilian theatre a splendid future by developing the art which the people most miss, utilizing it as a medium for educating through recreation as did its founder in Brazil, Father José Anchieta.

The foregoing is the latest historical and effective contribution to Brazilian stage.

*By Santa Rosa.*

## AMUSEMENTS AND RECREATIONS

**T**HERE are in Brazil magnificent buildings designed for theatrical shows and specially erected to offer spectators comfort in interiors of brightness and splendour. The aesthetical structure and sumptuousness present real features of monumental art in some of them to be found along the principal thoroughfares of our cities. Prominent among such are the Municipal Theatres of Rio de Janeiro and São Paulo, the João Caetano Theatre of Rio de Janeiro, also belonging to the Municipality, the Santa Isabel Theatre in Recife, the Paz Theatre in Belém, and that of the Amazonas in Manaus.

So as to stimulate theatre development in the country, a National Theatre Commission was instituted to be integrated into the system of permanent operating organs of the Ministry of Education and Health in compliance with the law which re-organized the Ministry.

As regards the cinema, its influence on Brazilian civilization is intensively expanding chiefly on the more important communities where these houses of amusement have greatly increased in number, some of them having been installed with refined luxury in specially constructed buildings furnished with all the technical requirements the discriminating public demands from such places.

According to systematic lines of distribution, films are introduced into the interior of the country to serve an increasing number of populous centres. A federal decree issued in April of 1932 nacionalized the cinematographic activities and established several provisions relating to the utilization of their educational and propaganda virtues.

An investigation proceeded by the Ministry of Education with reference to the year of 1936 indicates the existence of 1,822 houses of amusement and recreation operating in the country, of which 201 theatres, 391 cine-theatres and 867 cinemas. These figures, however, correspond to 1,382 reporting Municipalities, of which only 819 possessed establishments of this nature. It was not possible to compute in the above total elements for 96 other Municipalities which did not submit accurate data in time, concerning this specific enquiry.

Among the sports preferred by the Brazilian people, none surpasses association foot-ball mainly for its appeal to the masses of the population. In regard to the number of sports grounds existing in the country, the enquiry disclosed that in 267 out of the 1,382 reporting Municipalities, organized sporting grounds numbering 629 were recorded. Of these, 582 were maintained by private institutions, 29 by the Municipalities, 14 by the Union and 4 by the States.

In the principal Brazilian cities modern and well equipped stadia satisfy the technical requirements to the fullest possible extent.

## THE PRESS

IT was only after 1821 that journalistic activities encountered, in Brazil, an ambient favorable for their development. During the Colonial regime the few presses installed in the country were sooner or later confiscated, notwithstanding the fact that Count de Bobadela had shown himself to be in favour of the installation of a printing office in Rio de Janeiro. In 1808 there was created the "Imprensa Regia" (Royal Printing Department) which, during the course of the same year published the first number of the "Gazeta do Rio de Janeiro" (Rio de Janeiro Gazette), substituted in 1882 by the "Diário do Governo" (the Government's daily newspaper), forerunner of the present "Diário Oficial" (Official Gazette). Data on 1828 show that no less than 31 newspapers were then circulating in Brazil, 22 of them being published in the Provinces.

Official press statistics on 1912 transmit the information that, out of the 1,277 periodicals which were being published during that year, and which had declared the date of their foundation, 102 had started to circulate during the old Imperial regime and 1,275 after the Proclamation of the Republic. The first group of Brazilian newspapers started to circulate during the 1825 — 1844 period, there being, included in same the "Diario de Pernambuco" (the Pernambuco morning daily and the "Jornal do Commercio" (Journal of Commerce — the Rio de Janeiro morning daily), these being the two oldest newspapers published in Brazil, dating respectively from 1825 and 1826.

Of late years, however, the Brazilian press has been developing on a scale well worthy of note, both as regards its technical improvement and in respect to the influence it is able to bring to bear on the Public. The Federal District, and the States of São Paulo, Pernambuco and Rio Grande do Sul have important newspapers which, not only from the intellectual, but also from the material viewpoint, are worthy of special mention and honour Brazilian culture. It is unnecessary to state that in the Capitals of all the other States of the Brazilian Union there are regularly printed and circulate, interesting periodicals covering every branch of human activity. In the smaller Cities and country towns, even in the far interior of Brazil, there are printed and circulate, hundreds of newspapers and magazines of an appropriate size, all of them properly



bringing to bear their influence on local or regional matters, as the case may be. Most of them are weekly or fortnightly publications.

The graphic arts, in Brazil, have unceasingly made magnificent progress, and the proof of this assertion is our vast bibliographic production and in the large number of splendidly printed, magnificently edited, illustrated magazines on general culture and specialized matters, circulating throughout the country.

In 1937 — to speak only of the Capital of Brazil — there were no less than 161 periodicals registered at the "Serviço de Isenção de Impostos da Alfandega" (Custom House Duties Exemption Service), 21 of them being dailies, 14 having a circulation of more than 50,000.

The "Associação Brasileira de Imprensa" (Brazilian Press Association), which is the principal organ of those who dedicate their activities to the press, is now building in the Capital of the Republic a majestic edifice denominated the "Casa do Jornalista" (Newspaperman's Home), wherein there will be installed the headquarters of aforesaid press association. The "Casa do Jornalista" is being constructed so as to offer the maximum of comfort and convenience to the members of the "Associação Brasileira de Imprensa" and their guests, the interior decorations and installations also leaving nothing to be considered. In short the most modern appliances, apparatuses and material are being used to produce a building deserving to figure among the first rank congenerous ones now existing in the Capitals of the most progressive countries in the world.

Among the many aims of the "Associação Brasileira de Imprensa" (Brazilian Press Association) there is worthy of mention an intelligent plan for the rendering of assistance to the numerous members of the journalistic class in Brazil, whose respective interests are, by the way, also taken care of by a large number of other associative organs, including various "Sindicatos" or Unions.

## BROADCASTING

OWING to the immense extent of our National territory, which covers more than eight million square meters, the radio has become a means of communication of incalculable value for the domestic affairs of the Nation. And if the development verified in Brazilian broadcasting does not correspond as much as is to be desired, to the rôle demanded of same by our very special geographical conditions, one is bound to admit that we are already able to place on record a measure of progress sufficiently auspicious, in view of the recentness of its introduction into the country.

Really, it was only in 1919, that is to say less than twenty years ago, that the first broadcasting station was erected in Brazil. This initiative belongs to the "Radio Clube de Pernambuco", which is therefore the pioneer of National broadcasting.

The first Brazilian law on radio, issued in July 1917 establishes general precepts on wireless telegraphy and radiophony, without explicitly referring to broadcasting. In 1922, two small transmitting stations are acquired by the Government, one of which is at once installed under the direction of the National Telegraph Department, making various irradiations with the prefix: "S. P. E." This apparatus however, is afterwards ceded to the "Radio Clube do Brasil", founded in June 1924 and constituted as a civil society to exploit the station.

Some time later, the other Government station is also ceded for private exploitation being delivered to the "Radio Educadora do Brasil", which thus arose in the radio field. Aforesaid organization holds above mentioned station equipment under a precarious title, just as the "Radio Clube", does in regard to the first station. By the way, there fell on the "Radio Sociedade", on whose Directorate there figured names of the highest cultural meaning, the duty of exercising a decisive rôle in the development of Brazilian wireless telephony.

Thanks, above all, to an admirable surge of private initiative, at a time when artistic and cultural circles kept broadcasting, then still in an incipient stage, separate from any commercial interests whatsoever, numerous other stations successively made their appearance all over the country. The material and technical deficiencies then noted, were being overcome by strong individual efforts of goodwill and idealism, the campaign for the development of broadcasting constituting a disinterested one, having an almost purely educative and cultural meaning.

In São Paulo, there is founded the "Radio Educadora Paulista". Two new stations appear to stress the prestige of the North, in the National broadcasting field: one in Baía and the other in Ceará. In the South there are inaugurated the "Radio Sociedade Riograndense" and the "Radio Clube de Curitiba".

And new stations were being inaugurated, this rapid, widespread development of broadcasting reaching such a point that it became necessary to draw up a new decree regulating the matter. In 1924 the law promulgated in July 1937 is brought up-to-date, with a broader meaning, so as to be of enormous benefit to the industrial and commercial development of broadcasting.

In 1932, radio stands out, for the first time in Brazil, as an extraordinary element of party propaganda. There is placed on record a great new impulse in Brazilian broadcasting and, consequently, other reforms are being introduced in the mechanism of the older stations. Two new decrees are issued, one regulating the execution of radio communication services in National territory and the other making the law quite clear as to the details of the distribution of frequencies in the broadcasting belt determined for Brazil by the International Radiotelegraphic Convention.

Some time later a new legislative act is issued, versing exclusively on broadcasting services. And National wireless telephony is still governed by this decree. According to the provisions of same, existing stations and those that later on begin to function in Brazil, must have the following technical capacity: minimum aerial potential of 5,000, 3,000, 2,000, 500 and 250 watts, if they be installed respectively in the: 1 — Federal District and capital of the State of São Paulo; 2 — Recife (Pernambuco); Salvador (Baía); Belo Horizonte (Minas Gerais) and Porto Alegre (Rio Grande do Sul); 3 — Belém (Pará); Fortaleza (Ceará); Curitiba (Paraná) and Florianópolis (Santa Catarina); 4 — capitals of all the other States; 5 — cities having more than 100,000 inhabitants; 6 — cities with less than 100,000 inhabitants.

Since 1933, radio societies and broadcasting corporations having large resources and great probabilities of success, have begun to strengthen their position in this field. A little after above date there were installed high powered transmission stations. Those which, at the beginning, broadcasted with an aerial potential of 250 watts, with a very limited radius of action, increased their potential by more than 10,000, and even, sometimes, by more than 20,000, watts.

It became necessary to regulate the arrangement of the broadcasting belts of the highest powered stations, so as to prevent them from interfering with each other. The Nations of this continent came to an understanding



regarding this matter, and, in 1935 there was held in Buenos Aires the International South American Conference of Radio — Communications, which resulted in an international understanding of the highest importance.

Pursuant to the terms of said agreement, Brazil entered into possession of thirteen exclusive beams, *i. e.*, channels through which only Brazilian stations can broadcast, thus assuring greater power to the transmitting stations without interfering with the broadcasting of other South American apparatuses. Besides said exclusive beams, there are common channels, that is to say, the ones in which broadcasting must be accommodated in the frequency belts, with limited power.

Also in virtue of the exiguity of frequency for the broadcasting service, and owing to the need of a fair distribution of stations throughout the National territory, the Minister of Communications and Public Works, by an Order issued in March 1936, limited as follows the number of transmitting stations: Federal District, 7; São Paulo (capital), 5; Porto Alegre (Rio Grande do Sul), 2; Cidade do Salvador (Baía), 2; Recife (Pernambuco), 2; Belo Horizonte (Minas Gerais), 2; capitals of other States, 1; cities of the interior, 1. The same Ministerial Order determines that there be granted no more concessions in the localities where the number of stations is already equal to, or above, the fixed number, all stations in excess of same having to be suppressed in the order that they close down for any reason whatsoever.

As an expressive demonstration of the reasonable harmony and desire to collaborate, with which the radio societies and broadcasting concerns of the country are imbued, it is our duty to grant honorable mention to the "Confederação Brasileira de Radio-Difusão" (Brazilian Broadcasting Confederation), founded in 1931.

Another interesting aspect of the matter, which should be stressed in the history of broadcasting in Brazil, is the institution of the "Programa Nacional" (National Programme), nowadays called the "Hora do Brasil" (Brazil's Hour), broadcasted daily, from 8 p. m. to 9. p. m., by the "Departamento Nacional de Propaganda e Difusão Cultural" (National Department of Propaganda and Cultural Diffusion), through a system of transmitting stations that includes the almost totality of existing stations. Intended to be heard, at the same time, throughout the country, and simultaneously retransmitted by almost all of the National broadcasting organs, the "Hora do Brasil" (Brazil's Hour) is a very far-reaching power in the work of strengthening Brazilian cohesion, and is also, par excellence, the means of transmitting the thoughts of the governing circles of the country, even to the most distant points of our immense territory.

In 1937, there were inaugurated, in Brazil, nine broadcasting stations, six of them being in the State of São Paulo, two in the State of Minas Gerais and one in the Federal District.

Sixteen of the existing stations increased their frequencies, pursuant to the determinations of the Regulations in force.

The Government of the State of São Paulo inaugurated seventeen wireless telegraph and wireless telephone stations, for educational purposes, in the Radio Patrol Service.

In said year the number of radio amateurs' stations was increased to seven hundred and ninety six, all of them under the responsibility and control of the "Liga de Amadores Brasileiros de Radio Emissão" (League of Brazilian Broadcasting Amateurs).

## BRAZILIAN RADIO STATIONS IN EXISTENCE AS AT DECEMBER, 1938

STATION CALL LETTERS	LOCATION	ANTENNA POWER (kilowatts)	FREQUENCY		NAME OF TRANSMITTING ORGANIZATION
			In kilo- cycles	In metres	
PRA 2	Rio de Janeiro, Federal District.....	50	800	375.0	Ministério da Educação e Saúde
PRA 3	Rio de Janeiro, Federal District.....	10	660	348.8	Rádio Clube do Brasil
PRA 4	Salvador, Baía.....	10	740	405.4	Rádio Sociedade da Baía
PRA 5	São Paulo, São Paulo.....	10	1,260	238.1	Rádio São Paulo
PRA 6	São Paulo, São Paulo.....	10	760	394.7	Sociedade Rádio Educadora Paulista
PRA 7	Ribeirão Preto, São Paulo.....	0.5	730	411.0	Rádio Clube de Ribeirão Preto
PRA 8	Recife, Pernambuco.....	25	720	416.7	Rádio Clube de Pernambuco
PRA 8	Recife, Pernambuco.....	5	6,010	49.92	Rádio Clube de Pernambuco
PRA 9	Rio de Janeiro, Federal District.....	25	1,220	245.9	Sociedade Rádio Mayrink Veiga
PRB 2	Curitiba, Paraná.....	2	1,420	211.5	Rádio Clube Paranaense
PRB 3	Juiz de Fora, Minas Gerais.....	0.50	620	483.9	Rádio Sociedade de Juiz de Fora
PRB 4	Santos, São Paulo.....	1	1,450	206.9	Rádio Clube de Santos
PRB 5	Franca, São Paulo.....	0.25	1,240	241.9	Rádio Clube Hertz
PRB 6	São Paulo, São Paulo.....	10	1,200	230.9	Sociedade Rádio Cruzeiro do Sul
PRB 7	Rio de Janeiro, Federal District.....	5	900	333.3	Sociedade Rádio Educadora do Brasil
PRB 8	Rio Preto, São Paulo.....	0.25	640	468.8	Rádio Rio Preto
PRB 9	São Paulo, São Paulo.....	25	1,000	300.0	Rádio Sociedade Record
PRC 2	Porto Alegre, Rio Grande do Sul.....	5	680	441.2	Rádio Sociedade Gaúcha
PRC 4	Blumenau, Santa Catarina.....	0.25	1,330	225.6	Rádio Clube de Blumenau
PRC 5	Belém do Pará, Pará.....	2	670	447.8	Rádio Clube do Pará
PRC 7	Belo Horizonte, Minas Gerais.....	3	690	434.8	Sociedade Rádio Mineira
PRC 8	Rio de Janeiro, Federal District.....	5	1,360	220.6	Rádio Sociedade Guanabara
PRC 9	Campinas, São Paulo.....	0.5	1,170	256.4	Sociedade Rádio Educadora Campinas
PRD 2	Rio de Janeiro, Federal District.....	10	1,060	283.0	Sociedade Rádio Cruzeiro do Sul
PRD 3	Petrópolis, Rio de Janeiro.....	1	1,480	202.7	Petrópolis Radiodifusora
PRD 4	Araraquara, São Paulo.....	0.5	1,370	219.0	Rádio Cultura Araraquara
PRD 5	Rio de Janeiro, Federal District.....	1	1,400	214.3	Instituto de Educação do Distrito Federal
PRD 6	Piracicaba, São Paulo.....	0.25	820	365.9	Rádio Clube de Piracicaba
PRD 7	Sorocaba, São Paulo.....	0.5	1,080	277.8	Rádio Clube de Sorocaba
PRD 8	Niterói, Rio de Janeiro.....	1	1,320	227.3	Rádio Clube Fluminense
PRD 9	Sorocaba, São Paulo.....	0.25	970	309.3	Rádio Sociedade Sorocaba
PRE 2	Rio de Janeiro, Federal District.....	5	1,430	209.8	Rádio Sociedade Vera Cruz
PRE 3	Rio de Janeiro, Federal District.....	10	1,180	254.2	Rádio Transmissora Brasileira
PRE 4	São Paulo, São Paulo.....	5	1,300	230.8	Rádio Cultura "A Voz do Espaço"
PRE 5	Uberaba, Minas Gerais.....	1	1,390	215.8	Rádio Sociedade Triângulo Mineiro
PRE 6	Niterói, Rio de Janeiro.....	1	1,470	204.1	Rádio Sociedade Fluminense
PRE 7	São Paulo, São Paulo.....	5	1,410	212.8	Sociedade Rádio Cosmos
PRE 8	Rio de Janeiro, Federal District.....	25	980	306.1	Sociedade Rádio Nacional
PRE 9	Fortaleza, Ceará.....	2	1,320	227.3	Ceará Rádio Clube
PRF 2	Rio Claro, São Paulo.....	0.25	1,460	205.5	Rádio Clube de Rio Claro
PRF 3	São Paulo, São Paulo.....	5	960	312.5	Rádio Difusora São Paulo
PRF 4	Rio de Janeiro, Federal District.....	10	940	319.1	Rádio Jornal do Brasil
PRF 5	Marapicú, Federal District.....	12	9,500	31.58	Companhia Rádio Internacional do Brasil
PRF 6	Manáus, Amazonas.....	0.1	4,895	61.29	Governo do Estado
PRF 7	Campos, Rio de Janeiro.....	0.5	1,330	225.6	Rádio Cultura de Campos
PRF 9	Porto Alegre, Rio Grande do Sul.....	3	1,440	208.3	Empresa Radiodifusora Porto-alegrense
PRG 2	São Paulo, São Paulo.....	25	1,040	288.5	Rádio Tupi
PRG 3	Rio de Janeiro, Federal District.....	10	1,280	234.4	Rádio Tupi
PRG 4	Jaboticabal, São Paulo.....	0.25	1,250	240.0	Rádio Clube Jaboticabal
PRG 5	Santos, São Paulo.....	0.75	580	517.2	Sociedade Rádio Atlântica
PRG 6	Cruzeiro, São Paulo.....	0.5	640	468.8	Rádio Sociedade Mantiqueira
PRG 7	Jaú, São Paulo.....	0.25	1,010	297.0	Rádio Clube Jauense
PRG 8	Baurú, São Paulo.....	0.25	1,210	247.9	Baurú Rádio Clube
PRG 9	São Paulo, São Paulo.....	25	1,100	272.7	Rádio Excelsior
PRH 2	Porto Alegre, Rio Grande do Sul.....	25	600	500.0	Rádio Sociedade Farrroupilha
PRH 3	Piratininga, São Paulo.....	2	620	483.9	Rádio Piratininga (1)
PRH 4	Pelotas, Rio Grande do Sul.....	0.5	1,320	227.3	Sociedade Difusora Rádio Cultura Pelotas
PRH 5	Popos de Caldas, Minas Gerais.....	0.23	1,160	258.6	Rádio Clube de Popos de Caldas
PRH 6	Belo Horizonte, Minas Gerais.....	3	1,340	223.9	Sociedade Rádio Guarani
PRH 7	Ribeirão Preto, São Paulo.....	—	—	—	Lousada Bueno & Cia.
PRH 8	Rio de Janeiro, Federal District.....	5	1,130	269.5	Rádio Ipanema
PRH 9	São Paulo, São Paulo.....	5	840	357.1	Sociedade Bandeirante de Rádio Difusão
PRI 2	Marília, São Paulo.....	0.5	1,090	275.2	Sociedade Rádio Clube Marília
PRI 3	Belo Horizonte, Minas Gerais.....	25	880	340.9	Rádio Inconfidência
PRI 4	João Pessoa, Paraíba.....	10	1,110	270.3	Governo do Estado

(1) — In course of construction.



## FEDERAL DISTRICT RADIO TRANSMISSION

Number of transmitting stations and annual transmission time, in 1937

SPECIFICATION	Numerical data	SPECIFICATION	Numerical data
<b>I — TOTAL OF TRANSMITTING STATIONS</b>			
As regards the year of inauguration {	13	As regards the place {	
From 1925 to 1927.....	4	Retransmissions {	
From 1933 to 1934.....	4	From National stations.....	1,353
From 1935 to 1937.....	5	From Foreign stations.....	5
		Sub-total.....	1,358
As regards the nationality of the manufacturing concern {	8		
Brazilian.....	3	Music {	
English.....	2	Sacred.....	169
Dutch.....	1	Classic and select music.....	1,572
		Operas.....	1,830
As regards the maintaining entity {	1	Light and popular music.....	6,606
Union.....	1	Vocal and instrumental concerts.....	1,255
Federal District Prefecture.....	1	Sub-total.....	11,432
Civil associations.....	11		
As regards the antenna power (Watts) {	1	Dramas, comedies, etc.....	321
500.....	1	Humorism.....	634
1,500.....	1	Lectures and literary discourses.....	1,269
5,000.....	4	Civic ceremonies.....	265
10,000.....	4		
10,600.....	1	Religious ceremonies and subjects.....	28
20,000.....	2	Pedagogical subjects.....	239
As regards the capital of the maintaining entity {	2	As to subjects {	
Maintained by the Public Administration {	1		
120,000\$000.....	1	Courses {	
300,000\$000.....	1	Of sciences and letters.....	124
500,000\$000.....	1	Of languages.....	98
700,000\$000.....	1	Of gymnastics.....	846
900,000\$000.....	1	Of music.....	39
1,000,000\$000.....	3	Sub-total.....	1,107
2,000,000\$000.....	3		
		Phonograph record transmission.....	1,085
<b>II—ANNUAL TOTAL OF TRANSMISSION HOURS</b>			
	45,837	Medical and sanitary subjects.....	321
As regards the place {	43,033	Journalistic news.....	1,427
Transmissions.....			
From the studio itself..	457	Phonograph record transmissions.....	20,103
From Theatres and other centers of diversion....	355		
From public places.....	10	Commercial propaganda.....	6,248
From Parliamentary and Congressional Assemblies	372		
From cultural institutions.....	252	Other subjects.....	1,358
From other places.....	44,479		
Sub-total.....			

## EDUCATIVE MOTION PICTURES

IN Brazil, the use of the movies for educational purposes can be dated as from 1910, when there was inaugurated the motion picture division of the National Museum, to which the Rondon Commission afterwards made a very valuable technical contribution.

Professor Roquette Pinto brought from Rondonia (the Far Western Region of Brazil explored by the great Brazilian pioneer explorer General Candido Mariano da Silva Rondon, who knows more than any other man in the world today about Indian affairs) the first motion pictures taken of the Nanbikuaras indians, same being shown, in 1931, in the Conference Hall of the National Library.

To the Rondon Commission one must give due merit for having collected on a large scale intelligent documentary evidence of its geographical, botanical, zoological and ethnographical explorations, by means of admirable motion pictures, which today form a valuable part of the National patrimony.

Since then educative motion pictures have been used with success at various points of the country, for primary, secondary and higher grade teaching.

However, there were no legislative measures establishing bases for the regular use of this useful educative aid.

In 1929, Professor Fernando Azevedo, Director of the Department of Education of the Federal District, determined that educative moving pictures should be used in all the primary schools of Rio de Janeiro.

During the course of said year, the use of the "non flam 16 mm." film greatly facilitated the development of school movies. Professor Jonathas Serrano, of the Directorate of Public Instruction of the Federal District, officially inaugurated the movement on opening the 1<sup>st</sup> Exhibition of Educative Motion Pictures, in 1929.

Motion picture censorship was regulated by special provisions in every State of Brazil, its execution being entrusted to the local police at the city, town or village where the picture was being shown.

In 1931, the Brazilian Association for Education called the attention of the Government to the matter and proposed that police censorship be transformed into cultural censorship, making uniform the procedure for the examination of films and nationalizing its services.

In virtue of Decree 21,240, of April 4, 1932, H. E. President Getulio Vargas signed the law that nationalized the censorship service and which, in fact, marked the beginning of National movies.

This law enabled innumerable National films to be shown, facilitated the development of the motion picture industry and greatly increased the number of motion picture theatres in Brazil, which the 1937 statistics estimated at 1,683.

Owing to said decree and with the respective expenses defrayed by the "Censorship Tax", the Ministry of Education published, during two years, the "Revista Nacional de Educação" (National Education Magazine), distributed gratuitously in all the Cities of Brazil.

In the following year, there was created in the Federal District the Central Library of Education, with an Educative Moving Picture Division, for the purpose of supplying films to the public schools of Rio de Janeiro, and the Education Code, published in the same year in the State of São Paulo, adopted a new provision relating to the development of school movies.

In 1936, Decree 24,651 creates, in the Ministry of Justice, the Department of Propaganda and Cultural Diffusion, including among its attributions the Censorship of Moving Picture Films, which used to be a Department of the Ministry of Education.

Honourable mention may also be made of two specialized works on the subject: "*Cinema e Educação*" (Moving Pictures and Education), by Professors Jonathas Serrano and Venancio Filho, and "*Cinema contra Cinema*" (Movies versus Movies), by Mendes de Almeida, L. L. D.

Notwithstanding the various initiatives taken, educative movies had not attained in Brazil a systematic organization with aims and resources capable of guaranteeing complete success for their endeavours.

This was the situation when H. E. Minister Gustavo Capanema, of the portfolio of Education, presented to the President of the Republic his exposition of motives relating to the creation of the National Institute of Educative Cinema, as an experiment, with a Commission status.

On March 1, 1936, H. E. President Getulio Vargas signed the necessary authorization and the N. I. E. C. began to work in accordance with the bases formulated in the exposition of motives.



By Decree N. 378, of January 13, 1937, which gave a new organization to the Ministry of Education and Public Health, the N. I. E. C. was definitely included in the official list of public services, with the following aims:

a) — To maintain an educative moving picture division to serve official and private institutions of learning, pursuant to the terms of said law; b) — To organize and edit Brazilian educative films; c) — To permute copies of the films edited, or others, belonging to it, with similar Municipal, State or Foreign establishments; d) — To edit records or sound films, with classes, lectures and exposition of the subject by notable professors and artists, the N. I. E. C. having powers to sell or release said records and films for hire, separately; e) — To permute the records or films referred to in letter d; f) — To publish a magazine for the special purpose of educating through the modern technical process: moving pictures, phonograph, radio, etc.

Its organization, established on the bases originally approved by H.E. the President of the Republic, comprehends four divisions, all of them directly subordinate to the Director.

The Institute has already edited more than 150 films, and for their production established certain postulates which may be resumed as follows:

Every film of the Institute must be: 1 — Neat, nice, detailed; 2 — Clear, without any dubiousness to be interpreted by the pupils; 3 — Logical in its chain of sequences; 4 — Lively, because dynamical qualities constitute the first justification of moving pictures; 5 — Interesting in its esthetical assemblage and in its executorial details, so as to hold the attention of the audience, instead of boring same.

The popular educative films, placing on record events and ceremonies of outstanding National interest, such as "Dia da Bandeira" (Flag Day), "Dia da Patria" (Fatherland Day), etc., are not only intended for the schools, but also for labour organizations, athletic clubs and cultural societies.

The great pages of Brazilian literature are also illustrated cinematographically. "Um Apologo" (An Apologue) by Machado de Assis, is the first film of the series that the Institute intends to edit for the divulgation of the works of the greatest Brazilian authors.

The Institute maintains an Advisory Committee for its administrative organs, said Committee taking care of all questions relating to the editing of educative films. On same are to be found professors, technical artists and scientists, and its duty is to examine and approve the films edited by the Institute, and also to collaborate in research work, investigations and statistics of a technical and pedagogic character.

One of the most important aims of the Institute is to furnish information and elucidate points relating to educative motion pictures, in every way that same may be utilized.

Working for the double purpose of editing and directing the distribution of films, there falls on the Institute the duty of co-ordinating and divulging the most recent acquisitions of the motion picture industry, of a technical character, and that of supplying means and making suggestions which assure that efficient and productive use be made of same.

So as to properly direct establishments of learning in the purchasing of cinematographic material and in the organization of motion picture divisions in the schools, the Institute maintains permanent contact with the great producing centres in Europe and the U. S. A., selecting the best apparatuses and films from abroad. Besides this, it organized a library specializing in magazines and works on motion pictures.

The Institute files away in its archives the material relating to educative motion pictures in Brazil, thus co-ordinating a great number of valuable contributions, which were hitherto scattered about.

The Institute's field of action will shortly be amplified by the publication of a magazine, and through the installation of an auditorium for lectures, illustrated with films.

The N. I. E. C. gives free shows of educative films, intended for the public in general, at its motion picture halls.

On the occasion of the first Exhibition of Education and Statistics, the Institute had, and took due advantage of, an opportunity to organize a complete motion picture stand, where there were placed on view, besides foreign technical equipment, a 16 mm. sound picture apparatus, constructed in its own laboratories, and complete documentary data on the situation of educative motion pictures throughout the world in general and particularly in Brazil, by means of maps and other printed matter. While the Exhibition was open, free picture sessions were given to the public.

Among other experiments made in the N. I. E. C., one must grant special mention to the 16 mm. sound films in natural colours, and to the research work done in connection with experiments in phonetics, as regards the pronunciation of the National language in different regions of the country. The results of said research work were communicated to the Congress of the National Language in Song, held at São Paulo in 1937.

In order to use to advantage the very large number of films available on all subjects, edited in the U. S. A., Great Britain, France, Italy and Germany, the N. I. E. C. managed to make sound copies in the National language, cutting or amplifying the original documents and giving a new Brazilian educative meaning to said films.

In order to encourage the present rapid spread of 16 mm. educative sound pictures, the Government authorized the N. I. E. C. to offer a set of films to all those who can prove that they possess motion picture apparatuses of said type.

Finally the N. I. E. C. does not neglect another very important face of educative motion pictures: scientific research work. Besides the work already done in its laboratories, it has ably collaborated for the production of film evidence of the notable works on aseptic surgery written by Professor Mauricio Gudin and of the admirable studies on the morphology of bacteria, by Professor Cardoso Fontes, a contribution which in truth revolutionizes the old postulates of biology.

In 1938, the N. I. E. C. sent to Venice, during the International Exhibition of the Art of Motion Pictures, the films denominated "Victoria Regia" and "Ceu do Brazil" (The Sky of Brazil), which, for the first time, represent Brazilian production at an international congress on the art of motion pictures.

## CULTS

**A**MONG the principal reforms introduced into Brazilian legislation soon after the republican régime was instituted was that assuring absolute freedom of worship and placing all religious doctrines on the same level of equality before the State. This principle, logically consistent with the liberal spirit that influenced the national formation, has permitted ample independence to all creeds in Brazil. In this connection the new Constitution of November 10, 1937, maintains the declaration that "all individuals and



religious sects may freely and publicly exercise their cult, meet for this purpose and acquire real estate, observing the provisions of common law and the requisites of public order and good usage”.

The Brazilian people, however, profess in the great majority the Roman Catholic Religion, whose doctrine began to exercise a predominant hold upon us ever since the earlier colonial days, when the banner of Christ was first raised in the land of the Holy Cross, as Brazil was then called, to illuminate the work of the Jesuits in evangelizing and catechising the Indian elements. The first Mass was celebrated by Father Henrique de Coimbra, in Porto Seguro, on a Sunday of April 1500, and the memories of Father Nobrega, a contemporary of St. Francis Xavier, and Father Anchieta, are held by the Brazilians in everlasting honour for their missionary and civilizing labours.

In accordance with the Roman Catholic Church ruling in force throughout the world, Brazil is divided into 17 Ecclesiastic Provinces, comprising, within their great circumscriptions, 17 Archdioceses, 54 Dioceses, 23 Prelacies and 2 Prefectures all summing up a total of 96.

The data relating to the primary circumscriptions, similarly to the large ones, corresponding to the year of 1934, are in some instances incomplete and omissive. However, it can be seen by them that the Ecclesiastic Provinces of Brazil numbered 2,876 Parishes, 76 Curacies, 30 Curate Chapels, in a total of 2,982 circumscriptions.

There are about eleven thousand catholic temples, many of which constitute real art monuments with outstanding features of religious architecture and ornamental tiles, costly carving and silver work. Some of these edifices were built during the two first centuries of the colonization period and stand thus as legitimate foundations of the nationality, marked since the early days by the widespread influence of the Jesuits in their work of devotion and apostleship throughout the country.

One of the most important of these early churches, from the point of magnificence and treasures of religious nature, is the São Francisco Monastery in Salvador, Baía, the great catholic centre, with its remarkable appearance of a sumptuous church, the only one of its kind in existence in Brazil, probably in America. The church of Graça, also in Baía, dates back to 1582 and, still earlier the Ajuda church was the first episcopal see built in the promising land by the Company of Jesus. The São Bento monasteries and other shrines and churches of various Religious Orders stand out also for their antiquity and interest.

But, although the Roman Catholic Religion is strongly upheld by the preference of the majority of the population, there are also other cults more or less diffused in Brazil. Among these Protestantism was prominent in 1933 with 730 churches established throughout the various political units of the Federation and distributed according to their creeds as follows: Anglican, 4; Baptist, 284; Independent Baptist, 2; Evangelic Christian, 10; Congressionalist, 17; Episcopal, 10; German Evangelic, 48; Lutheran, 125; Methodist, 78; Pentecostal, 31; Presbyterian, 103; Independent Presbyterian, 18.

In the southern States of Santa Catarina and Rio Grande do Sul the protestant churches have grown in strength due chiefly to the influence of the foreign colonies. The spiritualist doctrine possesses also a large number of adepts in Brazil.



# *TOURISM*





## INTRODUCTORY

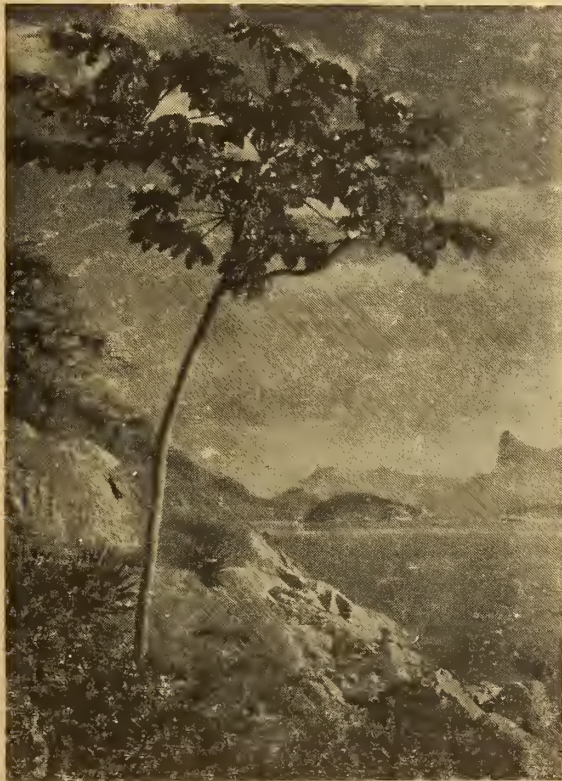
**V**ERY few countries can offer as many attractions to the tourist as Brazil. Its enormous extent of territory with a vast number of rivers, the many mountain ranges showing high peaks separated by deep valleys, the prairies and dense forests, are all gradually coming to have a special

significance among the travellers for the large scenic and recreational areas made accessible.

The highest summits are found near the coastal ranges along the eastern side of the country and provide a charming contrast of the wide panorama of hills to the magnificent plains seen in various directions.

From the long sea-shores to the great hinterland, from north to south, there are many impressive areas which still maintain the primitive wilderness shrouded in mysteries and offering unequalled opportunities for thrilling journeys.

Nature's gifts to Brazil distinguish it among all the countries of the world. At the mountain resorts of the sub-tropical and temperate zones, flowers bloom all the while and the air is pure and invigorating. Places lying even well within the tropical regions



*Along the sea-board cliffs*

in northern Brazil are under the beneficial influence of the trade winds blowing from east to west and show strange peculiarities of climate, healthy and agreeable in most instances.

In culminating points of the great northern inland plateau frosts have been observed during the winter, but of course the days are delightful and the nights are noteworthy for the balsamic air from the forests. Though some of the north-eastern regions lie in a latitude equatorial in climate and where cacti mingle with the rest of the vegetation, yet in the table-lands they are very salubrious and important cotton plantations are to be seen.

Central and southern Brazil offer also varied tourist attractions. From the cliffs, lakes and lagoons on the coast to the upper plains and woodlands, through pasture sections, trips are exceptionally interesting to travellers, who thus have the opportunity to see also the largest cattle-raising zones of the southernmost regions of the country. Here, geological features take on another character, more wonderful contrasts appearing on the alpine scenery of some spots, with flowers of a new and attractive kind. In some of the southern parts of the country a fleece of snow may be seen sometimes in the winter season.

Every visitor to Brazil is particularly struck on landing by the luxuriant vegetation. The scenes are fascinating in the extreme and their increasing popularity all over the world has greatly contributed to the successful development of tourism in the country.

On the other hand, means of conveyance to the centres of tourist attractions have been improved to a considerable degree and nothing is being spared to bring the ports up to a state of absolute efficiency.

### RIO DE JANEIRO AND ENVIRONS

Rio de Janeiro, the Capital of Brazil, is now classed with the world's most important and fashionable resorts for its natural wonders and many forms of recreation available. The city itself ranks as the second South American city, the third among the Latin nations, the fourth of the New World, and lives up to the setting provided on the eastern shore of the Guanabara Bay by its matchless surroundings.

With asphalted and well lighted avenues, wonderful bathing beaches, new residential districts, modern buildings everywhere and a recently built up-to-date Airport connected with the whole world, Rio offers the visitors, besides the natural recreation areas, good accommodation in many fine hotels, some of which are first class type. At Carnival time the city awakes to the new life and joy of a four days and



*A glimpse of the main thoroughfare in Rio*



nights of the belithe festival. Carnival in all its gaiety is seen nowhere better than in Rio. Happy crowds dance at fancy dress balls, and in the streets the air is full of laughter and song.

The harbour of Rio de Janeiro is visited all the year round by vessels of every nationality trading to and from all countries, as well as by regular passenger liners. During the European and North American winter season — December to March — a number of luxury cruises sails from their respective countries to and around South America, and Rio is the unrivalled port of call in their chartered itineraries. Last season, three of the largest ships in the world — the "Normandie", the "Bremen" and the "Nieuw Amsterdam" — entered the portals of the magnificent Bay of Guanabara for a stay of a few days on cruises specially arranged to Brazil.

Any time of the year may be taken as suitable to visit Rio de Janeiro. However, the cool weather of the winter time here — June to September — might be called a splendid spring and an ideal tourist season, not only for the residents from the various States of Brazil and from the neighbouring countries, but for travellers in general. And this is precisely the period of brilliant events in local social life and of everything that contributes to an enjoyable stay, also shared by the thousands of Argentines and Uruguayans, who come to Rio at this time on vacation.

Brazil's largest metropolis, framed in charming environs of majestic encircling hills and noble mountains, some of which rise abruptly from the heart of the city, surely appeals to the tourist as a real spot for pleasure. Whether viewed from the bay or from the top of the mountains, scenes combine to exert a dominating influence over the human soul.



*A view of Copacabana — The famous section on the ocean coast of Rio*

The visitor to Rio can easily get to any of the points of interest, as modern highways have opened up many new extensions to touring. A sightseeing

drive may first be taken around the main sections of the city and along the sinuosities of various white beaches in the bay and on the ocean coast. Then, up the Tijuca hills in a circular tour across the forest, enjoying the tropical foliage, the distant landscapes, or the graceful contour of huge rocks. On this excursion leaping cascades and picturesque grottos will be seen, besides the "Mesa do Imperador" and "Vista Chinesa", the two famous spots situated high on a pass, from which a quaint panorama of the city and harbour is obtained.

Of thrilling charm is the quite unique view from the "Pão de Assucar" (Sugar Loaf) mountain standing guard at the entrance of the bay. The ascent is made in two stages by an aerial cable car. The first, to the Urca mountain, half way up; the second, from the Urca to the top of the Sugar Loaf, 1,300 feet high. From this coign of vantage the sunset and, a little later, the sight of the city lights spread out along the tortuous ways below, are scenes of

enchantment which remain forever engraven on the memory of the tourist.



*The picturesque inlet of Botafogo in Rio*

Corcovado (Hunchback) is another mountain of lavish splendour, from the summit of which the view is considered one of nature's greatest show in the world. Though much higher than Sugar Loaf its peak does not boast of the maximum altitude in Rio. The highest point in the immediate vicinity of the Capital and within its areas of recreation is the Tijuca peak, 3,300 feet above sea level, a favourite objective of many climbers in summer. To the top of Corcovado, 2,300 feet high, and where the statue of Christ the Redeemer was erected, the ascent is made either by cog-wheel railway or by automobile, both ways running up the hills through a feast of the beautiful green vegetation, flowers, humming-birds and butterflies.

Other interesting excursions may be made while in Rio, including the Botanical Garden, the museums, parks and monuments, and the visit around the islets in Guanabara

Bay, among which the superb and romantic island of Paquetá never fails to awaken the emotions and interest of nature lovers.





*The bathing beach of Copacabana*

Niterói, across the bay and connected by ferries, is the Capital of the adjoining State of Rio de Janeiro. Its Icaraí and Saco de São Francisco beaches are famed for their bathing and scenery. Niterói was an Indian settlement at the time of the discovery of Brazil, and the oldest railway line in the country had its modest beginning in this city.

### *SUMMER RESORTS AND CAMPING AREAS*

Within easy reach of Rio, by a modern concrete highway (less than two hours' drive) and by train, Petropolis, the city of hydrangeas, carnations and orchids, is claimed to be the queen of the Serra da Estrela, a hilly part of the chain of the Organ mountains. Owing to its healthy climate, comfortable hotel accommodation and access to many scenic points, this summer resort, over 3,000 feet above sea level, is annually favoured by a great number of foreign residents in South America as well as the Brazilian elite. Independência, an elevation near Petropolis, commands a fine panoramic view of the surrounding country. On bright days, the entire bay of Rio may be clearly seen in the distance from this spot. Particularly attractive is also the view of the valley below and the ravines on the northern side, where fantastic rock ridges and steep cliffs protrude from massive mountains. Here the finger-like peaks (Dedo de Deus and others) stand towering high in the air as if to guard the entrance to Therezopolis, another splendid summer resort situated just behind these organ-shaped granite formations.

For the vacationist who prefers mountain air and scenery to the attractions of the coast, there are still other summer resorts with ample facilities for outdoor recreation near Serra dos Orgãos and on the Paraíba Valley in the State of Rio de Janeiro, along the route from the Federal District to the States of São Paulo and Minas Gerais, as, for instance, Paulo de Frontin, Miguel Pereira, Itatiaia,

Vassouras and Friburgo. Mountaineering and camping may be enjoyed in a thousand and one fascinating ways in many different areas of the three States. Within forty miles from Rio, on the inland way up to São Paulo and Minas, are the highest summits of the Serra do Mar and the traveller will have the opportunity to see a huge massif with strange slopes and ridges and the famous Itatiaia peak, surrounded by clustered projections called "Black Needles" — an over-8,000-foot-high challenge to the adventurous climber. Itatiaia is a National Park reservation.

### *SÃO PAULO, SANTOS AND MINAS GERAIS*

A trip to São Paulo offers, not only worthwhile scenes on the route to this second largest city in Brazil and Capital of the State of São Paulo, but also the opportunity to see the great coffee plantations where the willingness and hospitality of the gentleman-farmers make every visitor, with more time at his disposal, wish to prolong his stay in the *Fazendas*. Along the electrified railroad and the highway routes from São Paulo to Jundiaí, Campinas and farther on the Paulista region, are many progressive cities with large coffee plantations and vineyards which may be visited. Special excursions can be arranged in Rio and São Paulo and tourists are welcome to the farms.



*Aerial view of São Paulo*

As a great agro-industrial centre, contributing more than 30 % of the total revenue of the country, the State of São Paulo boasts of its prosperous Capital city, embellished with handsome public buildings, skyscrapers, luxuriant parks and some beautiful spots for excursions, among which the visitor should not miss the Ipiranga monument and museum situated in an historical site,



where Dom Pedro I proclaimed the Independence of Brazil; and the Instituto Butantan (Snake Farm) where live reptiles from all Brazil are kept for study and production of immunizing sera.



*The Ipiranga Museum (São Paulo)*

Like several other regions of the country, the hinterland of the State of São Paulo occupies an ideal geographical situation, in which navigable rivers and lofty cataracts lend beauty and grandeur to the scenery and afford valuable water power resources. Possessing extraordinary interest as the richest coffee growing region of the world, São Paulo is also renowned for its marvellous thermal springs and great educational and cultural progress.

The natural gateway to the sea of this thriving State is Santos, the greatest coffee port in the world and one of the busiest shipping harbours in Brazil. This second largest city in the State lies amid tropical landscapes and is reached from Rio by ocean steamers in about 13 hours. Santos has magnificent bathing beaches and other recreational resorts and, inland up to São Paulo in little less than a two hours' journey, either by a railway pullman car or by an excellent concrete paved road, the green hilly scenery of flowering trees and creepers makes a particular strong appeal to the visitor.

From Rio, by the Central Railway one may reach São Paulo by train in one day's journey, or by a luxurious sleeper, overnight. An excellent Air Service runs planes daily to São Paulo (about 90 minutes' flight) and, occasionally, to other far cities up in the interior of Brazil. Buses are also being used in regular schedules from Rio to São Paulo, Petropolis, in the State of Rio de Janeiro, and to Juiz de Fora and Belo Horizonte, in the State of Minas Gerais. The latter State is on a rich mineral and agricultural region of the vast central table-land of Brazil, and Belo Horizonte, a model city built in a lovely valley nearly half a century ago, is its Capital.

As a part of Minas Gerais is situated in fertile highlands and over the basin of the São Francisco River, the traveller has opportunity to see in various routes,

several cascades and a number of very picturesque spots of sylvan beauty. Railroads and highways traverse the State in every direction passing by many towns and through important pastoral zones and centres of the manganese, gold and diamond industries.



*The old Ouro Preto city in Minas Gerais*

Ouro Preto, in Minas Gerais, has a very rich soil in various kinds of mineral production and is one of the oldest cities of Brazil. Here, Morro Velho is the deepest gold mine in the world and the only one that is being explored now among the many that could easily be operated in the vicinity of Ouro Preto. Owing to its churches, buildings and monuments of exclusive historical interest and its importance connected with memorable events of the past, the city was made a national reservation and is, among other old cities, such as Sabará, Mariana and Diamantina, a most interesting sight to all visitors. Near Belo Horizonte there is the fantastic Maquiné Cave, one of the many wonders of the State and which the excursionist should never fail to see.

### *WATER SPRINGS AND SPAS*

The mineral springs of Brazil attract crowds of health-seekers every year, not only from every part of Brazil, but from other countries. Poços de Caldas, São Lourenço, Caxambú, Araxá, Lambary and Cambuquira, in Minas Gerais; and Serra Negra, Lindoia, Prata and others in São Paulo, have developed attractive spas for vacationists and invalids. They possess highly valuable mineral waters and many of them are fitted with latest installations for carrying out the best methods of therapeutic treatments. From a tourists' point of view, they are of easy access from Rio and from São Paulo, by train, by new automobile roads and even by airplanes, and guests find them with



every comfort of modern life in fine hotels and casinos and in the thermal establishments where medicated baths of hot springs may also be taken. The cool invigorating air of the mountains and the abundant facilities for outdoor recreations and enjoyment amidst a brilliant though restful scenery make these spas the ideal summer resorts in Brazil.



*A view of Cazambú*

In Baía, Santa Catarina, Rio Grande do Sul and other States there are also mineral water springs splendidly located, the actions of which have been investigated, both chemically and physiologically, and reported to be of great therapeutic importance.

A long circuit route to visit the spas in Minas Gerais and São Paulo, is provided by the main highways which connect the Federal District with the various recreational areas in the States of Rio, Minas Gerais and São Paulo, starting from an returning to the Capital of the latter State. This is a new pleasant touring experience never to be forgotten.

### *VISITING THE EASTERN STATES*

Northbound from Rio, along the route to the main ports on the coast, tourists travelling by steamer would have first a picturesque approach to Vitoria, Capital of Espírito Santo, a State which lies just north of Rio, east of Minas Gerais, and south of Baía. Minas Gerais sends much of its produce to Vitória for loading into overseas vessels, and this together with the exports of Espírito Santo make the port one of the most important trade centres in Brazil. The trip entering the harbour is quite an extensive succession of scenic surprises winding through unexpected turnings and narrow passages between cliffs and green hillsides up to the island-dotted bay.

The following port to visit en route is Salvador (popularly known as Baía), the Capital of the State of Baía, in the Bay of All Saints.

Baía is the oldest city in Brazil. For more than two centuries it was the Capital of the country, and today it is the fourth largest city in population. Looking like a luxurious Iberian city of the Mediterranean, with quaint old buildings on a "lower town" lying close to the bay, and an "upper town" where old monasteries, convents and hundreds of churches mingle with modern residences and parks in pleasure loving districts, the sight of Baía, quite unlike that of other cities in South America, affords a most striking spectacle to the tourist. The two sections separated by an almost perpendicular cliff are served by trolleys and elevators which bring the people of Salvador together.

Shrines of great antiquity and interest with many relics are to be seen. The Cathedral claims having been originally erected as a Jesuit college in the XVI century, and other Churches are celebrated for their costly interiors worth admiring.

The São Francisco River, which rises in southern Minas Gerais and wends its way right through the central part of Baía, running almost parallel with the coast, is navigable to a large extent in this State. The river pursues a north and northeast course and turns almost abruptly eastward down to the boundaries of the State of Alagoas where it plunges over the famous Paulo Afonso falls taking a series of tremendous leaps before reaching the sea at Sergipe. Many tourists find it particularly enjoyable going by stream as far as the nearest navigable point of the falls to view the foaming rapids and the great surge of water tumbling into the gorge below. The place may also be reached by railroad and by new highways starting from Pernambuco and Alagoas.

Baía has a considerable mineral wealth and most progressive agricultural industries. It is the centre of the cocoa trade. Tobacco, cotton, sugar and many other kinds of tropical produce are also exported through the port of Salvador. As an intermediate harbour lying upon the main ocean routes along the South



*Salvador (Baía) seen from an old fortress*



American Atlantic coast, either from Europe and Africa or from the United States and Asia, Baía is visited by regular luxurious liners, and many special cruise-ships have included the city in their trips for shore excursions during the short time spent in port. Besides the historical features of the old city there are several picturesque spots and interesting views along circuit drives around the city and beaches, when the visit to the interior is not accessible to through passengers.

### THE AMERICAN VENICE

En route northwards, skipping Aracajú, a typical city set in a background of tropical trees, Capital of Sergipe, the smallest of the Brazilian States; and Maceió, the Capital of the State of Alagoas, the land where the majestic falls of Paulo Afonso amaze the traveller, the next port to come in sight is the "Venice of America", as the city of Recife, Capital of the State of Pernambuco, is called.

The State of Pernambuco has many important industrial centres in the interior connected with Recife by several railroads and by many highways. Sugar plantations cover very extensive areas, cotton is of considerable importance for its famous quality and large output, and a great variety of other products is widely grown in Pernambuco, causing Recife to be a busy trading port and also a modern and prosperous city in northern Brazil. It is 1,124 nautical miles from Rio de Janeiro and is well termed the ocean gateway and most convenient port of call to westbound steamers. Like Baía, the harbour is visited also by luxurious liners on their routes to and from the southern ports. A base for dirigible communication with Europe had been established in Pernambuco some years ago, but now the international aircraft with regular stop-overs in various ports of Brazil is entirely run by three long organized and dependable airway companies of foreign origin.

Recife is divided in various sections by channels of the Beberibe and Capiberibe rivers and over their quiet waters bridges of stone and iron, dating back to Imperial days, give the city a personality quite its own. The history of nearly four centuries is colored all over by monuments, old buildings, convents



*A bridge scene in Recife (Pernambuco)*



and baroque churches. Ruins of fortresses and ancient walls and battlements are still to be seen in Pernambuco and may also speak of the Dutch dominion over the region.

A sightseeing drive would show tourists the points of historical interest, the seaside resorts and fashionable residential quarters of the town. An imposing avenue adorned with coconut palms runs along the southern edge of the city and commands a striking view of the ocean giving also an idea of the tropical scenery near the coast.



*Olinda — An historical spot near Recife*

### *NORTH OF PERNAMBUCO TO THE AMAZON*

Farther north of Pernambuco, lies a number of ports on the ocean coast and on several rivers up to the great Amazon and its tributaries as far as Iquitos, in Perú. Foreign passenger and freight liners connect Liverpool and other markets of the world with Belem and Manaus and a few other ports on the Tocantins and Amazon rivers and their navigable affluents, as well as with some of the main ports of the northeastern region along the Atlantic coast. Fine Brazilian coasting steamers are maintained in regular lines also, from the Amazon down to the southernmost ports of Brazil on coast line voyages of about 4,000 miles. Some of the steamers extend their routes farther to Montevideo and Buenos Aires.

Cabedelo, the next stop after leaving Recife northbound, is the seaport to João Pessoa, Capital of Paraíba, one of the chief cotton-growing northeastern States. The wharf is connected by railway to Recife. The city of João Pessoa, situated partly on a hill overlooking the estuary of the Paraíba River, is linked by railway and various roads to Cabedelo and the principal interior towns and through them to the bordering States of Pernambuco, Rio Grande do Norte and Ceará.



*The northern fishing raft ready to sail*

Natal, in Rio Grande do Norte, is becoming very important as the first calling port in South America for the air routes from Europe and Africa. The city is on the Potengi River and is the main outlet for the fine cotton grown in the State. Airplanes call frequently at Natal on their Pan-American routes or on the way to or from Europe.



*A central square in Fortaleza (Ceará)*

Fortaleza, 280 miles from Natal, is the Capital of Ceará, the land of Iracema, the maid of lips of honey. The city spreads over an extensive plain of beautiful green landscapes and long beaches of sandy hills where cacti, carnauba and coconut palms are characteristic features providing attractive tropical scenery. The population of Ceará is mostly of native descendants of Portuguese and Indians, and the way Fortaleza goes on astonishingly progressing and modernizing all the time augurs for it a prominent place among the cities in northern Brazil. The State is also famed for its excellent quality of cotton. Fine long staple are produced on the fertile soil of the Jaguaribe Valley and large reservoirs for irrigating purposes have been built in some of the interior zones.

A few hours from Fortaleza by train there is a mountainous region where Baturité, a flourishing city famed for its temperate climate, and other picturesque places on the hills afford suitable conditions for summer vacations. Paying guests are received in farms and old colonial homes of Guaramiranga, a little village near Baturité. At the northern part of the State other small towns on the Serra da Meruoca provide ideal places for mountain rest. Two famous caves are to be seen by the excursionist: "Boqueirão das Lavras" and the fantastic "Ubajarra". As a cotton-growing and hide-exporting centre, Ceará is one of the most important of the northeastern Brazilian States and regular navigation service is maintained between its ports and Europe and North America. Camocim is used as an airport for the weekly plane calls of the Pan-America Airways System.

Teresina city, the inland Capital of Piauí, lies a few leagues up the Parnaíba River and is connected to the sea coast by railways in the State and through Maranhão and Pernambuco. The city of Parnaíba and other small ports are on the river. While Piauí has the shortest coast line of any other State, the navigable river Parnaíba affords an excellent waterway to trade to and from its main industrial centres. Trips may be taken up river to see some of the characteristic north-eastern landscapes.

The Capital city of Babassu land, the State of Maranhão, is on the island where the French made their settlement in 1612, and it was then termed São Luiz in honour of King Louis XIII of France. Its cultural traditions have earned



*A view of São Luiz (Maranhão)*



it the name of the "Brazilian Athens". The city is an important centre of trade and a busy shipping port for the commodities exported by the State. It is also remarkable for its old colonial buildings. Maranhão ranks sixth in size among the Brazilian States, and several rivers drain its territory which is mountainous in the southern part. It gradually slopes northward and forms extensive plains on the coast. The journey to the northern part of Maranhão will show the Amazonian jungle spreading over enormous areas of this State and the Gurupí River marking the natural boundary line, from the coast to the west hinterland with the State of Pará.

### *APPROACHING THE AMAZON VALLEY*

The city of Belém, or Pará, the largest port on the lower Amazon, 340 miles from São Luiz, has good hotel accommodation and other modern conveniences to offer the exacting visitor. Its riverside resorts and broad shady avenues, an archaeological and ethnographical museum with gardens and zoo, and the tropical bosque on the outskirts with paths cut into the jungle, lend interest and charm to this equatorial Capital.

Pará has an enormous forest wealth. Its magnificent cabinet woods are famous all over the world. The third largest State in area, it is also the centre of rubber and Brazil nut trade. From the interior these two staple products, as well as cocoa, babassu, vegetable essences and other tropical commodities, find their way down to Belem, mainly by water, to be exported to various Brazilian ports of the south and to foreign countries. Fine fibres extracted from the palms that abound in the State are used for various industrial products and for beautiful articles of native craftsmanship. From Marajó, the great cattle-breeding island on the Amazon delta, exceeding Holland in area, come the most finished forms of ceramics. The Marajoara glazed pottery is famous and in Pará specimens of these and of queer Indian curios may be bargained.

### *UP RIVER FROM THE ESTUARY OF THE GREAT AMAZON*

Routes of thousands of miles by steamer from Belem up the mighty Amazon River and its navigable tributaries are regularly followed. A few hours up the broad stream from the estuary the myriad islands' region is entered through narrow passages embowered in overhanging vegetation, alive with roaming birds of beautiful plumage. The trip is all the way of most dazzling sensations. Railways provide overland transportation on some of the upper areas of other rivers where rapids obstruct the navigation.

From Belém to Manaus, the splendidly built and up-to-date Capital of the State of Amazonas, an eight hours' flight by plane is now in fashion as an extension of tours added to air cruises to South America. One can hardly describe the beauties of the flight over the winding waterways on the lower Amazon, with brief calls at Curralinho, Gurupá, Santarém and Obidos, and then, straight up to Manaus. The dense forests with their giant trees and wild shrubs interlaced with creepers of prolific growth, extending in every direction over the green plains to the South side and to the mountains on the North and West sides of the Amazon Valley, will be viewed from the air in all the grandeur of the many still unexplored areas unfolding to the infinite.

Macaws of brilliant plumage, toucans, resplendent trogons, egrets, the melodious Iapurú, and millions of other birds color the forests, while monkeys, lizards and parrots play their own part in the strange symphony of tropical



*A glimpse of Manaus (Amazonas)*

wilderness. Thousands of varieties of fresh-water fish have been classified in the Amazon and the king of all of them is the Pirarucú, the Brazilian tasty cod, largely eaten in the country, and which sometimes grows up to nine feet in length and a weight of about 200 pounds.

Amazonas is the largest State of Brazil and covers a territory of eight hundred thousand square miles bounded by the States of Pará and Mato Grosso, the rubber country of the Acre Territory, and by Venezuela, Guiana, Colombia, Perú and Bolivia.

Several months' journey overland, or by stream conveyance, or but only a few hours by plane, through the Upper Amazon to the remote inland sections of the Orinoco Valley and to the Roraima range, then to the Oiapoc in the northern region, or to Mato Grosso, in the south, the equipped traveller would come across the mysterious primeval jungle where nomad Indians, or Indian settlements may be met. But, those staying in Manaus for a while and not prepared for the thrills of such long expeditions, may explore the immediate surroundings of the country in various modes: afoot threading the way behind native guides into the woods; to Tarumá falls by launch; canoeing with the natives to the gorgeous ponds in which the wonderful *Vitória Régia* grows; or through almost impenetrable tunnels of interwoven foliage to the spots where the Amazonian orchids are carelessly scattered about. Hunting is enjoyable and everything is so intriguing and so amazingly tropical, that even the most sophisticated tourist will be dumbfounded.

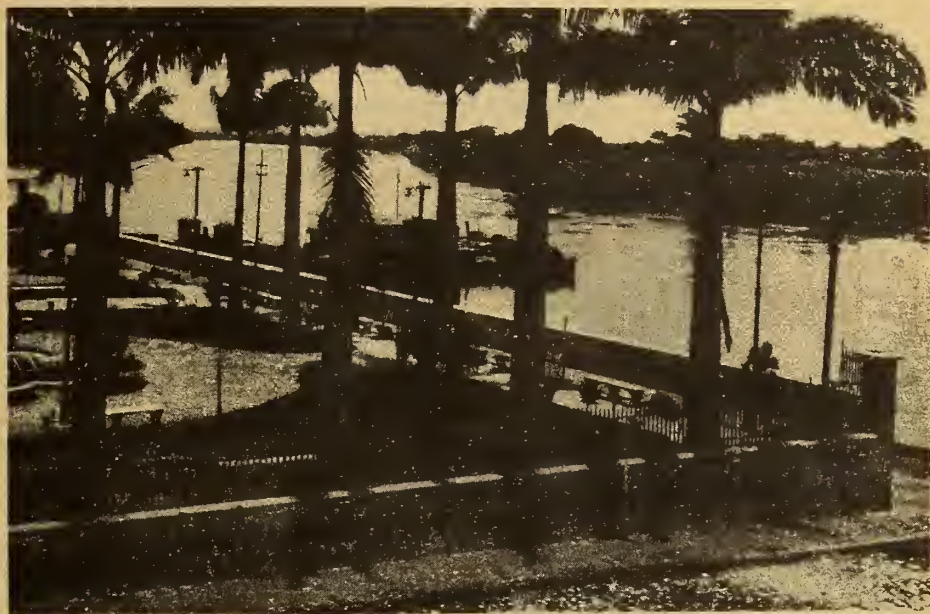
### *MATO GROSSO AND GOIAZ*

Mato Grosso and Goiaz, the two inland States extending over an important part of the Central plateau of Brazil, the second and the fourth largest territorial units in the country, respectively, are more or less similar in natural resources and climate and have much in common with many regions of the Amazon



Valley. Most of the rivers seem to have their natural sources in these States. The middle and western parts of Mato Grosso are highly and healthy and in Goiaz the Pireneos mountains attain the height of nearly 4,500 feet. These regions are related to the most exciting early days of the gold hunters and diamond seekers and of Indian hostility. The smoke signals, conveying news to the tribes and warning of the approach of strangers, were seen by the newcomers, the Paulistas, who pioneered the white settlement and opened the far west of the country, linking the great plateau also with the Amazon.

It has been possible for a long time to travel from these regions all the way by the streams to the Amazon delta and in good steamers to the River Plate estuary by the Paraná-Paraguay system, using, of course, overland transportation, either new railways or other means, wherever rapids or falls interrupt the navigable courses. The access from Goiaz and Mato Grosso to São Paulo, Rio de Janeiro and other States is also becoming easier with the highways built lately and the new extensions of the railways already in operation. Finally, new air lines are under study to connect several parts of the country with the West by air routes traced in a fairly comprehensive scope, which will change the complexion of the transport problem.



*A glimpse of a pier and garden near Cuiabá (Mato Grosso)*

Cuiabá, Capital of Mato Grosso, is a city founded soon after the first colonists came to settle on the smiling valleys of the Brazilian farthest hinterland early in the eighteenth century. Goiania, the new Capital of Goiaz, is being built with all the indispensable requisites of a modern city in a very healthy region of splendid natural advantages. Though already the seat of the State Government, that transferred the administrative quarters from Goiaz, the old Capital, the new city will only be officially inaugurated coincidentally with the Eighth National Congress of Education to be held in Goiania among other celebrations, June 15 to 25, 1940.



A great future lies before Mato Grosso and Goiaz, and Brazil depends much upon the full development of their vast natural wealth to confirm its right to be in the forefront of nations.

The two events, the inauguration of the city of Goiania and the cultural meeting, both sponsored by the Federal and State Governments, are considered one of the initial nation-wide moves in carrying on the recently disclosed plan for the awakening of the West. They will attract authorities, teachers, educationalists and tourist parties from everywhere in Brazil. And now that distances of thousands of miles do not mean the same as in the times before aerial navigation existed, the announced advances of culture and civilization will be not only historical in their extraordinary objectives and effects; they will be actually practical in calling the attention of the administrator, the investor and the enterpriser to nature's treasures lying on the Araguaia Valley and the unparalleled possibilities for the development of tourist attractions throughout the Brazilian West.

### *SOUTHBOUND FROM RIO*

Again by steamer, and leaving Santos behind, several ports of call will be reached on the coast line of the States of Paraná, Santa Catarina and Rio Grande do Sul. Thus, the route will show Paranaguá, Antonina, São Francisco, Florianopolis, Laguna, Rio Grande, Pelotas, Porto Alegre and other ports in those States which will give the traveller opportunity to see some of the most important outlets of the southern wealth and wellknown centres of trade in Brazil.

The accessibility of the States south of Rio de Janeiro and São Paulo has been one of the factors in their progress. In addition to being conveniently served by various means of overland transportation, they are either traversed



*A public garden in Curitiba*

by or linked with the main course of the southern streams. The strip of lowland along the southern coast is semi-tropical but the mountains and plains of the interior are an entirely different world, wrapped in the spell of the magic scenery of the temperate zones with splendid locations for summer resorts. Here the climate is enjoyable the year round, notwithstanding the winter being intensively cold in the more elevated regions where the lakes freeze over and snow falls.

From Paranaguá, a seaport in a lagoon-like harbour at the entrance of Antonina bay, through which the main traffic of the State of Paraná is conducted, a journey made by train over the Paranaguá-Curitiba-Ponta Grossa railroad is not to be missed. First, along the slopes of the foothills covered with banana plantations and then in spirals higher and higher, now tunnelling, bridging, twisting and turning a thousand times, now crossing cascading streams and again speeding upward and onward, the trip affords an exciting panorama of the most beautiful changing scenes ever provided by the engineering skill of a rail-route. After about sixty miles journey the traveller arrives at Curitiba, the Capital of Paraná, on the plateau at an altitude of three thousand feet above sea level. The railway proceeds inland with branches irradiating to other areas and there are also several highways running over the territory, together with interstate railroads that connect São Paulo, Paraná, Santa Catarina and Rio Grande do Sul and go as far as Argentina.

Curitiba, the tenth largest city in population and the chief centre of trade for mate and pine wood in Brazil, extends over a considerable area and has every convenience and most of the modern attractions of a health resort. Not far from the city are herva-mate plantations, vineyards and groups of stately pine trees (Araucarias).

Paraná depends much on its agriculture and on forestry produce. The regions north and westward of the State, including the uplands, are characterized by prominent features such as groves of pine trees here and there and magnificent valleys and serras. In different spots of the Ivaí and Tibají rivers there



*A typical landscape in Paraná*



are waterfalls of some importance, and historical ruins in Villa Rica, mammoth rocks in Vila Velha, and wild herba-mate fields will no doubt interest those travelling through various directions in the interior of Paraná. Right at the West end of the State, on the Iguassú River, facing the Argentine side on the boundary line, one will stare at the mightiest demonstration of hydro resources and great scenic attractions of the famous South American waterfalls.



*On the rails from Paranaguá to Curitiba*

Back to the seashores to resume the journey southbound, the traveller may visit the ports of Santa Catarina, one of the smallest States in the Union, lying between Paraná and Rio Grande do Sul, with highlands in the west. São Francisco, an interesting old city, and Itajaí, are seaports on the coast serving the rich centres of trade of Blumenau and Joinville, on the northern portion of the State. From Blumenau upland a railway follows a picturesque route along the windings of the Itajaí Assú River. In regions farther up, crossed by the São Paulo-Rio Grande Railway, which within the borders of the State runs part of the way close to the banks of the Rio do Peixe, the scenery resembles that of Paraná. Except for the dairy produce and cattle-raising, both well developed in the State, the rest of the natural resources are more or less like Paraná with herba-mate as the main product. The climate and nature being extremely bountiful a paradise was found here for the North-european settlers since the early days of colonization.

Florianopolis, the Capital and chief port of call in Santa Catarina, stands on an island connected with the mainland by a steel bridge 2,800 feet long. The city has a background of lofty hills and is picturesque when seen from the sea or from the Morro das Pedras. Leaving Florianopolis southbound there are Imbituba, and, at the head of a lake, Laguna, another old city in Santa Catarina. Laguna is a port connected with Tubarão where important coal mines are being exploited.

### *RIO GRANDE DO SUL AND THE PAMPAS*

Retracing the tourist route, the adjoining State of Rio Grande do Sul will be the last but not least to be visited by the traveller interested in circuiting Brazil from East to West and from North to South.



The first organized port of call in the State is Rio Grande, the only deep water wharf in the far south of Brazil, situated at the entrance of Lagôa dos Patos and 872 miles from Rio de Janeiro. The port is visited by many coasting and overseas vessels and a good deal of life and movement is seen in this chief outlet for hides, wool, beef, farming and extractive industries, factory production, coal and wine largely exported by the State.

Lagôa dos Patos is a lagoon about a hundred and forty miles long by thirty miles wide and is connected by São Gonçalo canal to Lagôa Mirim, another large lake. A few miles up Lagôa dos Patos is Pelotas, the second city of the State in population and also a very important clearing centre, connected by railway with the interior and with the port of Rio Grande.



*The Technical University of Rio Grande do Sul (Porto Alegre)*

Porto Alegre, the Capital of the prairie State of Rio Grande do Sul, is situated on the left bank of the Guaíba River, near the northern extremity of the lagoon and a great part of the city is built on a promontory of fair height affording a delightful panorama. It is the fourth largest centre of population in Brazil and the most important in trade south of São Paulo. Quite a number of interesting points of recreation in and outside the city are of easy access by good roads and by water. Besides the growing interest in art and letters the wealth of Porto Alegre also manifests itself in great public buildings, fine hotels and everything else of convenience for a modern living in an attractive metropolis.

The number 1 State in cattle-breeding and wheat in Brazil, the Pampas is also very rich in all kinds of minerals and brings a considerable share into the trade channels of the nation. Ranches are known as "estancias" and the

best pasture lands are in the elevated region near the southern boundary where droves of cattle driven by gauchos, wearing their traditional wideawake hats, catch the eye of the traveller.

Excellent overland transport facilities and the river system have been exceedingly valuable in developing the producing and exporting capacity of the State and in expanding its trade and cultural relations.

There is a variety in every feature of Rio Grande do Sul commanding special admiration. Very interesting trips can be arranged to start from Porto Alegre in order to visit the colonial districts and the various cities of the interior, the typical Pampean areas and the narrow ranges of hills called "cochilas", the enormous "estancias" with their beef curing establishments, ruins of the old Jesuit missions and other outstanding points of attraction, with side excursions, but the glorious tourist climax are the dramatic wonders of the waterfalls on the Iguassú and Paraná rivers, via Uruguaiana.

### HOW TO VISIT THE WATERFALLS

Iguassú and Guaíra falls ! Who has not longed to go there ?

The famous Iguassú cataracts, reputed to exceed the Niagara and Vitoria Falls both in size and splendour, and Guaíra's seven falls, ranking in scenic grandeur with all the natural wonders of the world, allure the sightseer to the supreme satisfaction of his soul.



*The waterfalls of Iguassú*

Their thundering waters and swirling rapids produce a sound audible at a long distance and a column of mist above them is visible 15 miles away. It has been tried to describe these magestic falls and cararacts and the tropical



luxuriance and life of their background, in words of various languages, but obviously it is impossible to portray even by picture or brush the whole of such an awe-inspiring spectacle of natural splendor. It must be seen !

The most favourable season for a visit is from April to November but excursions are operated all the year round. The several falls are far, yet within reach over various means of modern conveyance which take one there either from Porto Alegre, Rio de Janeiro, São Paulo or Montevideo and Buenos Aires. In these cities there are well organized sightseeing companies which offer comfortable combined tours of thrilling panoramic attractions along their routes with stop-overs allowed for personal exploration or for side excursions, by steamer, boat, rail, automobile or airplane. The following are the most popular itineraries offered to the tourists, and are recapitulated hereunder, upon consultation of reliable data concerning the trips organized by travel agencies in Brazil.

To Sete Quedas in Guaíra a ten day's round trip, not using planes, and stopping at the best hotels in São Paulo and Guaíra, would be: twelve hours from Rio de Janeiro to São Paulo by day or night train or automobile; twenty seven hours from the Sorocabana Station in São Paulo to Presidente Epitácio (Porto Tibiriçá); two days from Presidente Epitácio to Porto Guaíra by river boat, departures being made immediately after the arrival of the São Paulo train on alternate Wednesdays; three days from Porto Guaíra to Presidente Epitácio by river boat, departures being made on alternate Saturdays. The boat connects with the train from Presidente Epitácio back to São Paulo.

To Iguassú the itinerary and time would be the same from Rio and São Paulo to as far as Tomaz Laranjeira or Guaíra. From Guaíra to Porto Mendes by train in three hours, and then to Foz do Iguassú by river boat in another six hours' trip.

To quote suggestions for reaching the scenic points from Foz do Iguassú, the first visit should be made by automobile to the falls on the Brazilian side: Marechal Deodoro, Benjamim Constant, Floriano Peixoto and Garganta do Diabo (Salto Union), through the last of which runs the boundary line between Brazil and Argentina. The second visit, on another day, would be to the falls on the Argentine side: Dos Hermanas are the chief, and Bozetti is the most turbulent and picturesque. The distinctive names of the others are Ramirez, San Martin, Belgrano, Mitre and Tres Mosqueteros. The three last falls and the Devil's Throat are best seen from an island reached by canoe.

Among the various excursions that can be taken to the neighbourhood of the falls, Marco Brasileiro is a favourite one. From this ideal vantage point one enjoys a fine view of the natural boundaries, formed by the Paraná River, between Brazil, Argentina and Paraguay. Puerto Aguirre can also be seen from here a short distance away on the Argentine side.

The typical returning route from Foz do Iguassú, after visiting the falls, is made by boat down the Paraná River in a day and a night to Posadas, a city in the Argentine Missions territory and a good point of departure for visits to the Santo Ignacio and other ruins and to several interesting spots in the interior. From Posadas, on a train of the North-east Argentine Railway, Paso de los Libres, on the Uruguay River, is reached in twelve hours. Then the river is crossed to Uruguaiana, Brazil, where the rail journey of the Rio Grande do Sul Railway is resumed to arrive in Porto Alegre, via Santa Maria, within twenty-eight hours. From Porto Alegre to Rio de Janeiro by steamer in four days, or by plane in six hours.



A regular air service is maintained between Porto Alegre and Uruguaiana. From Porto Alegre there are almost daily planes to Rio de Janeiro.

Another typical round trip to Guaíra and Iguassú falls from Rio de Janeiro follows the usual inland route to the scenic points of these falls and then from Puerto Aguirre down the river in a seven days' voyage with calls at Posadas, Corrientes, Paraná, Rosario and Buenos Aires. From Buenos Aires in a fast ocean liner it is only four days to the superb Rio de Janeiro with calls at Montevideo and Santos.

Besides the magestic falls of Paulo Afonso, between the boundaries of the States of Alagôas and Baía on the São Francisco River, there are many other big and small cataracts in Brazil. Of greater magnitude, among the innumerable waterfalls in the various States, are Oiapoc (Brazilian Guiana) nearly 300 feet high; Salto Grande de Jequitinhonha and the Paraguassú in Baía; Tombos, in Minas Gerais; Patos-Maribondo, Passo Fundo and Soledade, in Rio Grande do Sul; Rio Branco, Itapura and Avanhandava, in Paraná, all with their famous waters that tumble from rocky ledges to unknown depths amazing the visitor to the greatest country in South America.

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## GENERAL NOTE

In the various sections of this volume statistically arranged data on some outstanding features of physiography, demography, economics and sociography of Brazil appear under the necessary condensation. Terms were used in their technical acceptance, or else the meaning was conveyed into English as approximately as possible to ensure clearness in the purview of the subject-matter coming under certain headings. However, inadequacies or obscurities may have occurred due to the limitations imposed, and in point of varying definitions and difficulties of translation which caused some flaws to escape notice. The following indications seek to revise information or explain further some aspects as far as circumstances permit at the end of the book.

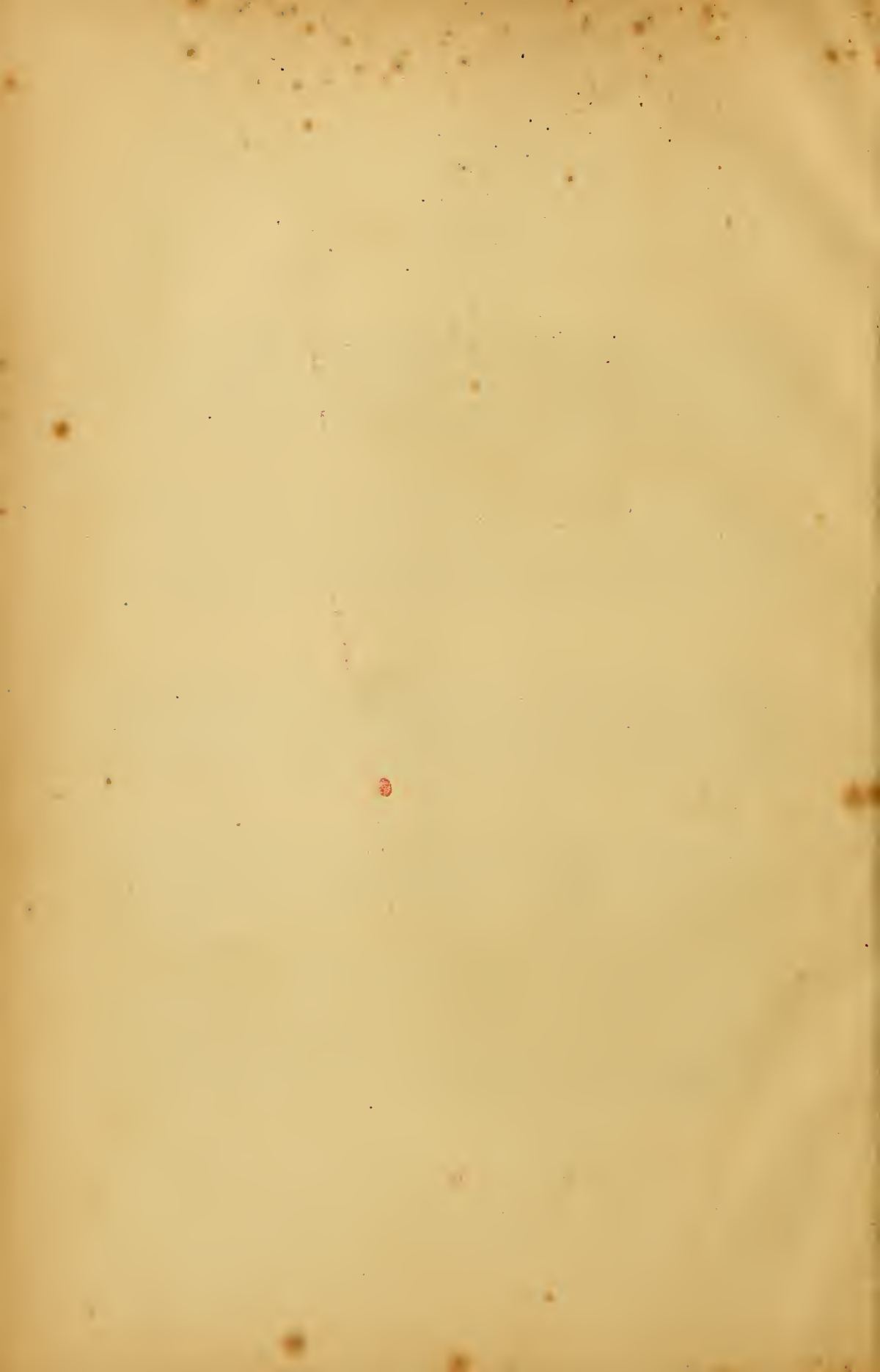
**TERRITORIAL DIVISION** — In the table on page 33, showing the political, judicial and administrative division of Brazil in 1936, "comarcas" are classified by "advancement" in lieu of "entrance" for the Portuguese word "entrância" which carries the idea of rank in the order of the judicial circumscriptions classed for the various legal procedures and the setting out upon the judicial career. Also in the same table "country towns" are used for "villages" where a great many municipalities have their seats. For judicial purposes "comarca" means the largest territorial division of each political unit, and is generally in charge of a Judge of the High Court. It might be taken to correspond to a "Country" or "Shire" only within limits of judicial administration.

**DEMOGRAPHIC SITUATION** — The statements of population for the capital city of the State of Goiás, in the General Censuses of 1872, 1890, 1900 and 1920 (tables on page 39 of this volume), as well as the estimates corresponding to years 1925, 1927, 1929, 1931, 1933 and 1935 (table on page 41) relate to the old capital, *i. e.*, the city of Goiás, while those of 1937 and 1938 are for Goiânia, the new capital of the State.— According to the calculations proclaimed for 31st December, 1937, the population of the city of Rio de Janeiro, capital of the Republic, was then 1,801,784 people, these figures having been omitted from the table appearing on page 41 of this issue.

**ECONOMICS AND FINANCES** — All the large accounts are carried in "contos of réis" or simply "contos". One conto is equal to 1,000 milréis.— All references to "pounds" as regards external trade values and other financial statements correspond to gold ££.— The Funding Loan appearing on table 335 as dated 1998 is the issue of 1898 subject to "Foreign Debt Adjustment Plan of 1934" and, also, to "Moratorium of Nov. 1937".— Figures for the quantity of sleepers exported in 1937 according to table on page 86 express units or number of ties instead of kilos.

The various units and signs or symbols for numbers, weights and measures used in the tables, comments or articles of this edition follow with their definitions, abbreviations, factors for conversion, etc.:

Commas separate hundreds, thousands, etc., and decimal figures are preceded by a full stop.— The sign "... " indicates that the information is not available or non-existent, "—" that the figure is nil.— Ton (1,000 kilograms) = 2,204.6 lbs.; kilogram, kilo or kg (1,000 grams) = 2.204 lbs.; gram or gramme = 15.432 grs.; litre or liter = 1 dm<sup>3</sup> (one cubic decimetre) = 1.0567 qts.; kilometer or kilometre (1,000 metres) = 0.62137 mile (3,280 feet, 10 inches; meter, metre, M or m = 39.37 inches; centimeter, centimetre or cm = 0.3937 inch; millimeter or mm = 0.03937 inch; one foot = 0.3048 metre; one mile = 1,609.35 metres; one hectare (10,000 m<sup>2</sup>) = 2.471 acres; one square metre (1m<sup>2</sup>) = 1,550 square inches; one square inch = 0.06452 square metre; one square yard = 0.836 square metre; one acre = 4,047 square metres.







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